

Response Factor Report ERGMS#6

Method Path : D:\MassHunter\GCMS\1\methods\
 Method File : 0040005.M
 Title : T0-15 by Selective Ion Analysis
 Last Update : Fri Apr 17 10:28:48 2020
 Response Via : Initial Calibration

Calibration Files

1 =W20DP004.D 2 =W20DP005.D 3 =W20DP006.D 4 =W20DP007.D 5 =W20DP008.D 6 =W20DP009.D

Compound	1	2	3	4	5	6	Avg	%RSD
-----ISTD-----								
1) ISS IS-Hexane-d14								
2) CT Acetylene	0.338	0.400	0.340	0.333	0.319	0.335	0.344	8.24
3) CT Propylene/Propane	0.376	0.419	0.344	0.347	0.341	0.365	0.365	8.12
4) CT Dichlorodifluo...	1.745	2.009	1.657	1.628	1.532	1.558	1.688	10.32
5) CT Chloromethane	0.757	0.799	0.646	0.627	0.589	0.600	0.670	13.00
6) CT Dichlorotetra...	1.723	1.972	1.624	1.578	1.489	1.502	1.648	10.95
7) CT Vinyl Chloride	0.491	0.568	0.485	0.452	0.429	0.446	0.478	10.38
8) CT 1,3-Butadiene	0.277	0.321	0.273	0.271	0.256	0.260	0.277	8.41
9) CT Bromomethane	0.566	0.655	0.559	0.514	0.463	0.449	0.534	14.24
10) CT Ethylene oxide	0.203	0.195	0.188	0.197	0.202	0.191	0.196	3.06
11) CT Chloroethane	0.239	0.272	0.231	0.223	0.201	0.171	0.223	15.50
12) CT Trichlorofluor...	2.139	2.450	2.028	1.938	1.760	1.695	2.002	13.72
13) CT Acrolein	0.339	0.343	0.295	0.261	0.246	0.250	0.289	15.10
14) CT 1,1-Dichloroet...	0.972	1.117	0.985	0.941	0.865	0.760	0.940	12.82
15) CT Trichlorotrifl...	1.704	1.947	1.768	1.624	1.515	1.539	1.683	9.57
16) CT Carbon Disulfide	2.245	2.592	2.219	2.124	1.979	1.849	2.168	11.81
17) CT Acetonitrile	0.554	0.533	0.505	0.488	0.449	0.445	0.495	8.89
18) CT Methylene Chlo...	0.576	0.658	0.616	0.554	0.517	0.536	0.576	9.17
19) CT Acrylonitrile	0.423	0.465	0.455	0.434	0.414	0.419	0.435	4.78
20) CT trans-1,2-Dich...	0.722	0.824	0.734	0.703	0.653	0.667	0.717	8.50
21) CT Methyl tert-Bu...	1.370	1.552	1.449	1.365	1.279	1.281	1.383	7.55
22) CT 1,1-Dichloroet...	1.225	1.381	1.288	1.189	1.121	1.155	1.226	7.77
23) CT Chloroprene	0.647	0.736	0.716	0.716	0.740	0.847	0.734	8.83
24) CT Ethyl tert-But...	1.437	1.686	1.619	1.607	1.635	1.830	1.636	7.77
25) CT cis-1,2-Dichlo...	0.759	0.879	0.849	0.802	0.794	0.867	0.825	5.70
26) CT Bromochloromet...	0.536	0.609	0.573	0.513	0.487	0.508	0.538	8.48
27) CT Chloroform	1.509	1.662	1.554	1.402	1.328	1.350	1.468	8.85
28) CT 1,1,1-Trichlor...	1.451	1.644	1.534	1.394	1.330	1.390	1.457	7.87
29) CT Carbon Tetrach...	1.286	1.456	1.367	1.252	1.192	1.244	1.299	7.40
30) CT Benzene	1.949	2.205	2.080	1.908	1.835	1.872	1.975	7.13
31) CT 1,2-Dichloroet...	0.721	0.830	0.805	0.743	0.733	0.796	0.771	5.81
32) CT tert-Amyl Meth...	1.231	1.467	1.449	1.517	1.596	1.767	1.504	11.77
-----ISTD-----								
33) ISS IS-1,4-Difluoroben...								
34) CT Trichloroethylene	0.299	0.346	0.315	0.300	0.299	0.335	0.316	6.45
35) CT Ethyl Acrylate	0.341	0.390	0.381	0.395	0.427	0.498	0.405	13.12
36) CT 1,2-Dichloropr...	0.327	0.370	0.345	0.319	0.306	0.321	0.331	6.82
37) CT Methyl Methacr...	0.459	0.487	0.460	0.444	0.447	0.473	0.462	3.55
38) CT Bromodichlorom...	0.589	0.667	0.621	0.575	0.545	0.551	0.591	7.82
39) CT cis-1,3-Dichlo...	0.184	0.210	0.204	0.210	0.229	0.294	0.222	17.16
40) CT Methyl Isobuty...	0.508	0.573	0.547	0.549	0.564	0.610	0.559	6.06
41) CT Toluene	0.716	0.855	0.840	0.852	0.846	0.903	0.835	7.50
42) CT n-Octane	0.367	0.466	0.512	0.589	0.606	0.644	0.531	19.45
43) CT trans-1,3-Dich...	0.167	0.175	0.178	0.165	0.178	0.240	0.184	15.26
44) CT 1,1,2-Trichlor...	0.263	0.301	0.286	0.272	0.266	0.285	0.279	5.14
45) CT Tetrachloroeth...	0.480	0.558	0.533	0.503	0.477	0.472	0.504	6.91
46) CT Dibromochlorom...	0.558	0.615	0.588	0.573	0.567	0.613	0.586	4.09
47) CT 1,2-Dibromoethane	0.196	0.202	0.195	0.201	0.226	0.300	0.220	18.62
-----ISTD-----								
48) ISS IS-Chlorobenzene-d5								
49) CT Chlorobenzene	0.729	0.811	0.774	0.727	0.714	0.770	0.754	4.91
50) CT Ethylbenzene	1.126	1.284	1.268	1.250	1.245	1.334	1.251	5.52
51) CT m,p-Xylene	0.901	1.084	1.143	1.169	1.144	1.212	1.109	9.93

Data Path : C:\gcms\1\data\MS6\W20D!\
 Data File : W20D!002.D
 Acq On : 28 Apr 2020 03:04 pm
 Operator : KSS
 Sample : 2004062-CCV1
 Misc : 0D14008
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 28 15:45:50 2020
 Quant Method : D:\MassHunter\GCMS\1\methods\0040005.M
 Quant Title : TO-15 by Selective Ion Analysis
 QLast Update : Fri Apr 17 10:28:48 2020
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.30min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	ISS IS-Hexane-d14	1.000	1.000	0.0	100	0.00
2	CT Acetylene	0.344	0.311	9.6	100	0.00
3	CT Propylene/Propane	0.365	0.318	12.9	100	0.00
4	CT Dichlorodifluoromethane	1.688	1.248	26.1	100	0.00
5	CT Chloromethane	0.670	0.565	15.7	100	0.00
6	CT Dichlorotetrafluoroethane	1.648	1.335	19.0	100	0.00
7	CT Vinyl Chloride	0.478	0.374	21.8	100	0.00
8	CT 1,3-Butadiene	0.277	0.222	19.9	100	0.00
9	CT Bromomethane	0.534	0.422	21.0	100	0.00
10	CT Ethylene oxide	0.196	0.219	-11.7	100	0.00
11	CT Chloroethane	0.223	0.198	11.2	100	0.00
12	CT Trichlorofluoromethane	2.002	1.568	21.7	100	0.00
13	CT Acrolein	0.289	0.177	38.8#	100	0.00
14	CT 1,1-Dichloroethene	0.940	0.874	7.0	100	0.00
15	CT Trichlorotrifluoroethane	1.683	1.290	23.4	100	0.00
16	CT Carbon Disulfide	2.168	1.610	25.7	100	0.00
17	CT Acetonitrile	0.495	0.369	25.5	100	0.00
18	CT Methylene Chloride	0.576	0.590	-2.4	100	0.00
19	CT Acrylonitrile	0.435	0.392	9.9	100	0.00
20	CT trans-1,2-Dichloroethylene	0.717	0.658	8.2	100	0.00
21	CT Methyl tert-Butyl Ether	1.383	1.450	-4.8	100	0.00
22	CT 1,1-Dichloroethane	1.226	0.973	20.6	100	0.00
23	CT Chloroprene	0.734	0.655	10.8	100	0.00
24	CT Ethyl tert-Butyl Ether	1.636	1.359	16.9	100	0.00
25	CT cis-1,2-Dichloroethylene	0.825	0.675	18.2	100	0.00
26	CT Bromochloromethane	0.538	0.333	38.1#	100	0.00
27	CT Chloroform	1.468	1.223	16.7	100	0.00
28	CT 1,1,1-Trichloroethane	1.457	1.247	14.4	100	0.00
29	CT Carbon Tetrachloride	1.299	1.158	10.9	100	0.00
30	CT Benzene	1.975	1.530	22.5	100	0.00
31	CT 1,2-Dichloroethane	0.771	0.677	12.2	100	0.00
32	CT tert-Amyl Methyl Ether	1.504	1.139	24.3	100	0.00
33	ISS IS-1,4-Difluorobenzene	1.000	1.000	0.0	100	0.00
34	CT Trichloroethylene	0.316	0.275	13.0	100	0.00
35	CT Ethyl Acrylate	0.405	0.481	-18.8	100	0.00
36	CT 1,2-Dichloropropane	0.331	0.382	-15.4	100	0.00
37	CT Methyl Methacrylate	0.462	0.589	-27.5	100	0.00
38	CT Bromodichloromethane	0.591	0.627	-6.1	100	0.00
39	CT cis-1,3-Dichloropropene	0.222	0.252	-13.5	100	0.00
40	CT Methyl Isobutyl Ketone	0.559	0.695	-24.3	100	0.00
41	CT Toluene	0.835	1.097	-31.4#	100	0.00
42	CT n-Octane	0.531	0.762	-43.5#	100	0.00
43	CT trans-1,3-Dichloropropene	0.184	0.200	-8.7	100	0.00
44	CT 1,1,2-Trichloroethane	0.279	0.346	-24.0	100	0.00
45	CT Tetrachloroethylene	0.504	0.518	-2.8	100	0.00
46	CT Dibromochloromethane	0.586	0.597	-1.9	100	0.00
47	CT 1,2-Dibromoethane	0.220	0.255	-15.9	100	0.00

Analytical Standard Record

Eastern Research Group

0D14008

Description:	2.50 ppbv ICV	Expires:	05/14/20
Standard Type:	Calibration Stan	Prepared:	04/14/20
Solvent:	Scientific Air	Prepared By:	Kameron Singer
Final Volume (mls):	6000	Department:	Air Toxics
Vials:	1	Last Edit:	04/14/20 15:32 by KSS

canister# 3234

Analyte	CAS Number	Concentration	Units
Acrolein	107-02-8	0.00248	ppmv
1,1,1-Trichloroethane	71-55-6	0.00253	ppmv
cis-1,2-Dichloroethylene	156-59-2	0.002485	ppmv
Chloroprene	126-99-8	0.00252	ppmv
Chloromethane	74-87-3	0.00253	ppmv
Chloroform	67-66-3	0.00251	ppmv
Chloroethane	75-00-3	0.00249	ppmv
Chlorobenzene	108-90-7	0.0025	ppmv
Carbon Tetrachloride	56-23-5	0.0025	ppmv
Carbon Disulfide	75-15-0	0.002495	ppmv
Bromomethane	74-83-9	0.002505	ppmv
Bromoform	75-25-2	0.002525	ppmv
Bromodichloromethane	75-27-4	0.00254	ppmv
Bromochloromethane	74-97-5	0.002525	ppmv
Dibromochloromethane	124-48-1	0.00259	ppmv
1,2-Dichloroethane	107-06-2	0.002525	ppmv
1,1,2,2-Tetrachloroethane	79-34-5	0.002545	ppmv
1,1,2-Trichloroethane	79-00-5	0.00253	ppmv
1,1-Dichloroethane	75-34-3	0.00248	ppmv
1,1-Dichloroethene	75-35-4	0.0025	ppmv
1,2,4-Trichlorobenzene	120-82-1	0.00249	ppmv
Benzene	71-43-2	0.002535	ppmv
1,2-Dibromoethane	106-93-4	0.002555	ppmv
Acrylonitrile	107-13-1	0.002495	ppmv
1,2-Dichloropropane	78-87-5	0.002535	ppmv
1,3,5-Trimethylbenzene	108-67-8	0.002515	ppmv
1,3-Butadiene	106-99-0	0.00252	ppmv
Acetonitrile	75-05-8	0.002615	ppmv
Acetylene	74-86-2	0.00246	ppmv
Dichlorodifluoromethane	75-71-8	0.002505	ppmv

Reviewed By

Date

Analytical Standard Record

Eastern Research Group

0D14008

1,2,4-Trimethylbenzene	95-63-6	0.00238	ppmv
Naphthalene	91-20-3	0.00248	ppmv
Trichlorotrifluoroethane	76-13-1	0.002515	ppmv
Trichlorofluoromethane	75-69-4	0.0025	ppmv
Trichloroethylene	79-01-6	0.002575	ppmv
trans-1,3-Dichloropropene	10061-02-6	0.002465	ppmv
trans-1,2-Dichloroethylene	156-60-5	0.002545	ppmv
Toluene	108-88-3	0.002485	ppmv
Tetrachloroethylene	127-18-4	0.002515	ppmv
tert-Amyl Methyl Ether	994-05-8	0.00264	ppmv
Styrene	100-42-5	0.00246	ppmv
Propylene	115-07-1	0.00246	ppmv
p-Dichlorobenzene	106-46-7	0.00264	ppmv
o-Xylene	95-47-6	0.002495	ppmv
o-Dichlorobenzene	95-50-1	0.002515	ppmv
cis-1,3-Dichloropropene	10061-01-5	0.00259	ppmv
m,p-Xylene	108-38-3, 106-42-3	0.005	ppmv
Dichloromethane	75-09-2	0.00246	ppmv
Dichlorotetrafluoroethane	76-14-2	0.002525	ppmv
Ethyl Acrylate	140-88-5	0.002585	ppmv
Ethyl tert-Butyl Ether	637-92-3	0.00262	ppmv
Ethylbenzene	100-41-4	0.00255	ppmv
n-Octane	111-65-9	0.00257	ppmv
Hexachloro-1,3-butadiene	87-68-3	0.00255	ppmv
n-Hexane	110-54-3	0.002525	ppmv
m-Dichlorobenzene	541-73-1	0.00242	ppmv
Methyl Ethyl Ketone	78-93-3	0.0026255	ppmv
Methyl Isobutyl Ketone	108-10-1	0.002575	ppmv
Methyl Methacrylate	80-62-6	0.002585	ppmv
Methyl tert-Butyl Ether	1634-04-4	0.00259	ppmv
Vinyl chloride	75-01-4	0.002495	ppmv
Ethylene oxide	75-21-8	0.0025	ppmv

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
9G18011	Ethylene Oxide Secondary Stock	S07/16/19	Mitch Howell	07/16/20	07/18/19 17:21 by MH	15
9J10002	TO-15 Secondary Stock Standard	10/10/19	Mitch Howell	10/03/20	10/17/19 13:31 by KSS	30

Reviewed By

Date

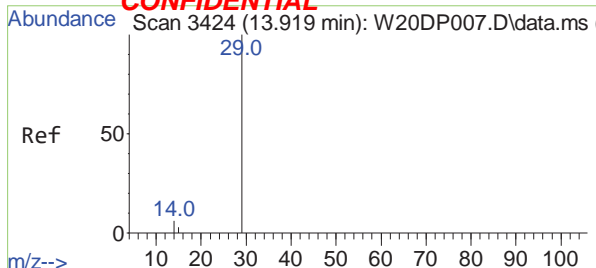
Data Path : C:\gcms\1\data\MS6\W20D!\
 Data File : W20D!002.D
 Acq On : 28 Apr 2020 03:04 pm
 Operator : KSS
 Sample : 2004062-CCV1
 Misc : 0D14008
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 28 15:45:50 2020
 Quant Method : D:\MassHunter\GCMS\1\methods\0040005.M
 Quant Title : TO-15 by Selective Ion Analysis
 QLast Update : Fri Apr 17 10:28:48 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) IS-Hexane-d14	18.388	66	50592	5.1840	ppbv	0.00
33) IS-1,4-Difluorobenzene	21.411	114	89059	5.3120	ppbv	0.00
48) IS-Chlorobenzene-d5	25.356	117	62129	5.0560	ppbv	0.00

System Monitoring Compounds

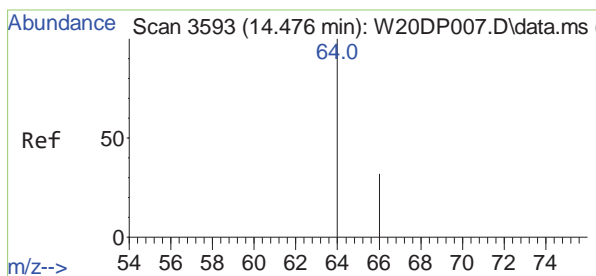
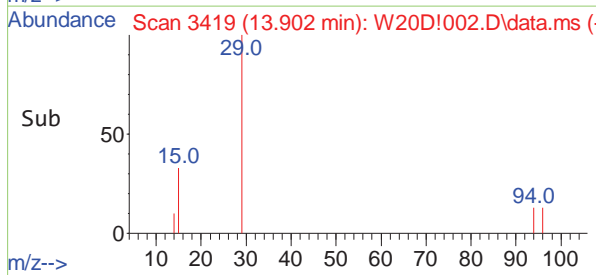
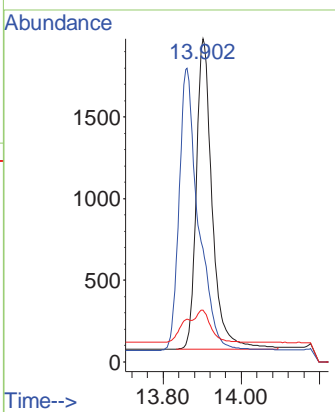
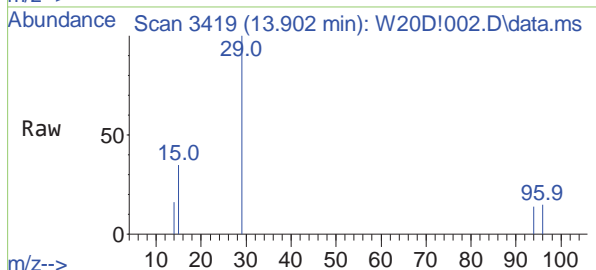
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Acetylene	4.269	26	7478	2.2270	ppbv	100
3) Propylene/Propane	7.188	41	7630	2.1404	ppbv	99
4) Dichlorodifluoromethane	8.276	85	30501	1.8514	ppbv	99
5) Chloromethane	10.768	50	13953	2.1345	ppbv	98
6) Dichlorotetrafluoroethane	10.826	85	32902	2.0459	ppbv	90
7) Vinyl Chloride	12.014	62	9102	1.9498	ppbv	99
8) 1,3-Butadiene	12.410	54	5456	2.0219	ppbv	99
9) Bromomethane	13.862	94	10316	1.9781	ppbv	98
10) Ethylene oxide	13.902	29	5332m	2.7886	ppbv	
11) Chloroethane	14.461	64	4821	2.2198	ppbv	99
12) Trichlorofluoromethane	15.357	101	38246	1.9578	ppbv	99
13) Acrolein	16.539	56	4286	1.5194	ppbv #	94
14) 1,1-Dichloroethene	16.674	61	21315	2.3235	ppbv	83
15) Trichlorotrifluoroethane	16.795	101	31651	1.9270	ppbv	97
16) Carbon Disulfide	16.971	76	39197	1.8526	ppbv	100
17) Acetonitrile	17.428	41	9414	1.9469	ppbv	96
18) Methylene Chloride	17.730	49	14174	2.5208	ppbv	86
19) Acrylonitrile	18.145	53	9536	2.2454	ppbv	100
20) trans-1,2-Dichloroethy...	18.181	96	16346	2.3362	ppbv	92
21) Methyl tert-Butyl Ether	18.193	73	36658	2.7166	ppbv	99
22) 1,1-Dichloroethane	18.880	63	23543	1.9670	ppbv	99
23) Chloroprene	18.980	53	16103	2.2486	ppbv	97
24) Ethyl tert-Butyl Ether	19.476	59	34757	2.1771	ppbv	99
25) cis-1,2-Dichloroethylene	19.711	61	16365	2.0324	ppbv	99
26) Bromochloromethane	20.039	128	8206	1.5638	ppbv #	79
27) Chloroform	20.176	83	29969	2.0925	ppbv	99
28) 1,1,1-Trichloroethane	20.400	97	30788	2.1652	ppbv	98
29) Carbon Tetrachloride	20.609	117	28241	2.2269	ppbv	98
30) Benzene	20.876	78	37852	1.9640	ppbv	99
31) 1,2-Dichloroethane	20.941	62	16677	2.2156	ppbv	99
32) tert-Amyl Methyl Ether	21.042	73	29343	1.9988	ppbv	95
34) Trichloroethylene	21.736	130	11878	2.2445	ppbv	71
35) Ethyl Acrylate	21.791	55	20860	3.0686	ppbv	100
36) 1,2-Dichloropropane	22.082	63	16237	2.9246	ppbv	81
37) Methyl Methacrylate	22.088	41	25535	3.3002	ppbv	88
38) Bromodichloromethane	22.412	83	26715	2.6955	ppbv	99
39) cis-1,3-Dichloropropene	22.974	75	10928	2.9369	ppbv	79
40) Methyl Isobutyl Ketone	23.146	43	30025	3.2063	ppbv	98
41) Toluene	23.439	91	45700	3.2628	ppbv	99
42) n-Octane	23.534	43	32838	3.6913	ppbv	95
43) trans-1,3-Dichloropropene	23.712	75	8278	2.6846	ppbv	82
44) 1,1,2-Trichloroethane	23.992	97	14690	3.1415	ppbv	91
45) Tetrachloroethylene	24.145	166	21850	2.5877	ppbv	100
46) Dibromochloromethane	24.536	129	25003	2.5467	ppbv	99
47) 1,2-Dibromoethane	24.729	107	10922	2.9602	ppbv	98



#10
Ethylene oxide
 Concen: 2.789 ppbv m
 RT: 13.902 min Scan# 3419
 Delta R.T. -0.018 min
 Lab File: W20D!002.D
 Acq: 28 Apr 2020 03:04 pm

Tgt Ion: 29 Resp: 5332

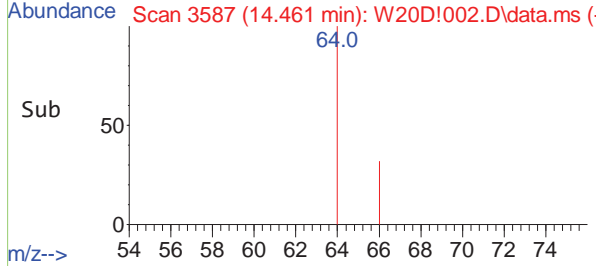
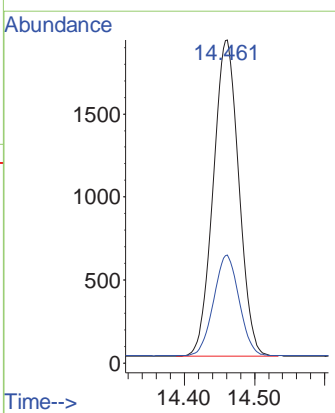
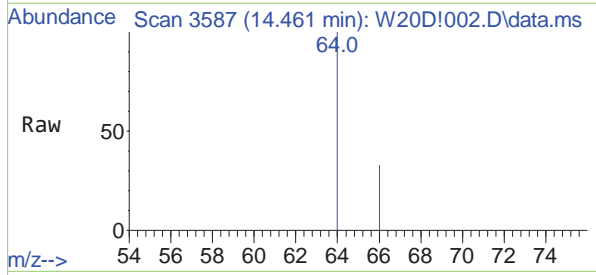
Ion	Ratio	Lower	Upper
29	100		
15	15.6	9.4	17.4
14	10.1	5.5	10.3



#11
 Chloroethane
 Concen: 2.220 ppbv
 RT: 14.461 min Scan# 3587
 Delta R.T. -0.015 min
 Lab File: W20D!002.D
 Acq: 28 Apr 2020 03:04 pm

Tgt Ion: 64 Resp: 4821

Ion	Ratio	Lower	Upper
64	100		
66	31.5	22.5	41.9



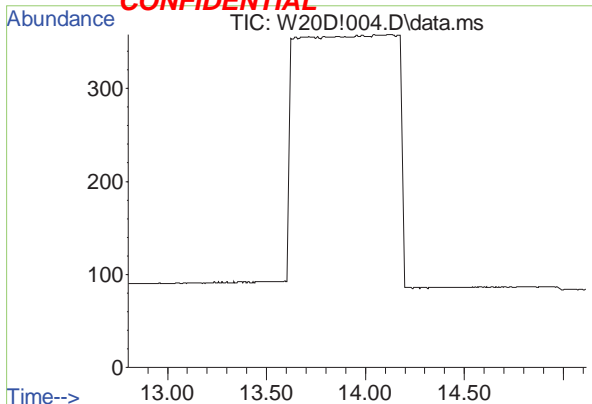
Data Path : C:\gcms\1\data\MS6\W20D!\
 Data File : W20D!004.D
 Acq On : 28 Apr 2020 04:55 pm
 Operator : KSS
 Sample : B0D2806-BLK1
 Misc : T-H1-841
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 29 10:45:11 2020
 Quant Method : D:\MassHunter\GCMS\1\methods\0040005.M
 Quant Title : T0-15 by Selective Ion Analysis
 QLast Update : Fri Apr 17 10:28:48 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) IS-Hexane-d14	18.394	66	51842	5.1840	ppbv	0.00
33) IS-1,4-Difluorobenzene	21.412	114	81817	5.3120	ppbv	0.00
48) IS-Chlorobenzene-d5	25.357	117	46246	5.0560	ppbv	0.00

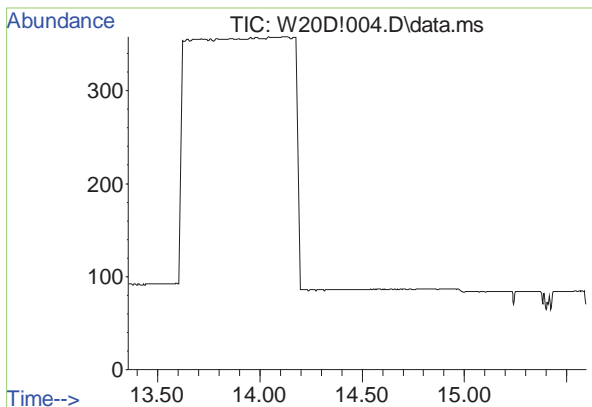
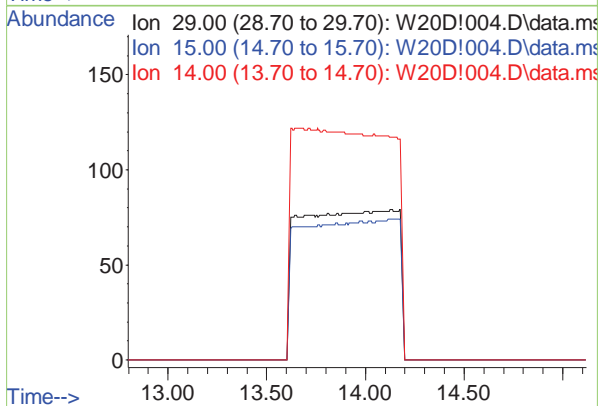
System Monitoring Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)	Qvalue
2) Acetylene	0.000	26	0	N.D.			
3) Propylene/Propane	0.000	41	0	N.D.			
4) Dichlorodifluoromethane	0.000	85	0	N.D.	d		
5) Chloromethane	0.000	50	0	N.D.			
6) Dichlorotetrafluoroethane	0.000	85	0	N.D.			
7) Vinyl Chloride	0.000	62	0	N.D.			
8) 1,3-Butadiene	0.000	54	0	N.D.			
9) Bromomethane	0.000	94	0	N.D.			
10) Ethylene oxide	0.000	29	0	N.D.			
11) Chloroethane	0.000	64	0	N.D.			
12) Trichlorofluoromethane	0.000	101	0	N.D.			
13) Acrolein	16.595	56	25	0.0086	ppbv #		77
14) 1,1-Dichloroethene	0.000	61	0	N.D.			
15) Trichlorotrifluoroethane	0.000	101	0	N.D.	d		
16) Carbon Disulfide	16.976	76	156	0.0072	ppbv		100
17) Acetonitrile	0.000	41	0	N.D.			
18) Methylene Chloride	0.000	49	0	N.D.			
19) Acrylonitrile	0.000	53	0	N.D.			
20) trans-1,2-Dichloroethy...	0.000	96	0	N.D.			
21) Methyl tert-Butyl Ether	0.000	73	0	N.D.			
22) 1,1-Dichloroethane	0.000	63	0	N.D.			
23) Chloroprene	0.000	53	0	N.D.			
24) Ethyl tert-Butyl Ether	0.000	59	0	N.D.			
25) cis-1,2-Dichloroethylene	0.000	61	0	N.D.			
26) Bromochloromethane	0.000	128	0	N.D.			
27) Chloroform	0.000	83	0	N.D.	d		
28) 1,1,1-Trichloroethane	0.000	97	0	N.D.			
29) Carbon Tetrachloride	0.000	117	0	N.D.			
30) Benzene	20.877	78	69	0.0035	ppbv		95
31) 1,2-Dichloroethane	0.000	62	0	N.D.			
32) tert-Amyl Methyl Ether	0.000	73	0	N.D.			
34) Trichloroethylene	21.736	130	24	0.0049	ppbv #		62
35) Ethyl Acrylate	0.000	55	0	N.D.			
36) 1,2-Dichloropropane	0.000	63	0	N.D.			
37) Methyl Methacrylate	22.104	41	17	0.0024	ppbv #		34
38) Bromodichloromethane	0.000	83	0	N.D.			
39) cis-1,3-Dichloropropene	0.000	75	0	N.D.			
40) Methyl Isobutyl Ketone	0.000	43	0	N.D.			
41) Toluene	23.433	91	16	0.0012	ppbv #		26
42) n-Octane	0.000	43	0	N.D.			
43) trans-1,3-Dichloropropene	0.000	75	0	N.D.			
44) 1,1,2-Trichloroethane	0.000	97	0	N.D.			
45) Tetrachloroethylene	0.000	166	0	N.D.			
46) Dibromochloromethane	0.000	129	0	N.D.			
47) 1,2-Dibromoethane	0.000	107	0	N.D.			



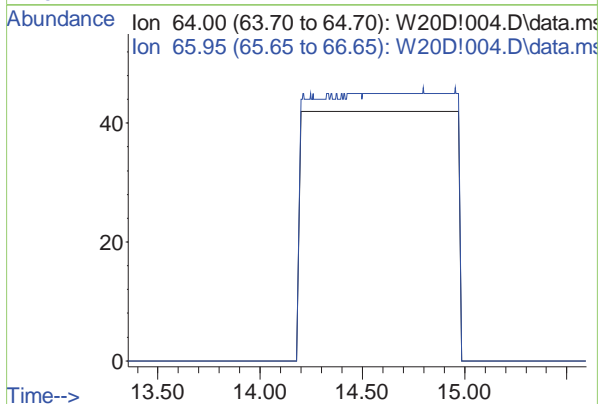
#10
Ethylene oxide
 Concen: N.D.
 Expected RT: 13.92 min
 Lab File: W20D!004.D
 Acq: 28 Apr 2020 04:55 pm
 Tgt Ion: 29

Sig	Exp Ratio
29	100
15	13.4
14	7.9



#11
 Chloroethane
 Concen: N.D.
 Expected RT: 14.48 min
 Lab File: W20D!004.D
 Acq: 28 Apr 2020 04:55 pm
 Tgt Ion: 64

Sig	Exp Ratio
64	100
66	32.2



Data Path : C:\gcms\1\data\MS6\W20D\$\
 Data File : W20D\$002.D
 Acq On : 30 Apr 2020 10:52 am
 Operator : KSS
 Sample : 2004066-CCV1
 Misc : 0D29005
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 30 12:12:08 2020
 Quant Method : D:\MassHunter\GCMS\1\methods\0040005.M
 Quant Title : TO-15 by Selective Ion Analysis
 QLast Update : Fri Apr 17 10:28:48 2020
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.30min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	ISS IS-Hexane-d14	1.000	1.000	0.0	100	0.00
2	CT Acetylene	0.344	0.280	18.6	100	0.00
3	CT Propylene/Propane	0.365	0.277	24.1	100	0.00
4	CT Dichlorodifluoromethane	1.688	0.979	42.0#	100	0.00
5	CT Chloromethane	0.670	0.477	28.8	100	0.00
6	CT Dichlorotetrafluoroethane	1.648	1.054	36.0#	100	0.00
7	CT Vinyl Chloride	0.478	0.335	29.9	100	0.00
8	CT 1,3-Butadiene	0.277	0.213	23.1	100	0.00
9	CT Bromomethane	0.534	0.346	35.2#	100	0.00
10	CT Ethylene oxide	0.196	0.155	20.9	100	0.00
11	CT Chloroethane	0.223	0.175	21.5	100	0.00
12	CT Trichlorofluoromethane	2.002	1.442	28.0	100	0.00
13	CT Acrolein	0.289	0.176	39.1#	100	0.00
14	CT 1,1-Dichloroethene	0.940	0.851	9.5	100	0.00
15	CT Trichlorotrifluoroethane	1.683	1.246	26.0	100	0.00
16	CT Carbon Disulfide	2.168	1.519	29.9	100	0.00
17	CT Acetonitrile	0.495	0.331	33.1#	100	0.00
18	CT Methylene Chloride	0.576	0.583	-1.2	100	0.00
19	CT Acrylonitrile	0.435	0.395	9.2	100	0.00
20	CT trans-1,2-Dichloroethylene	0.717	0.630	12.1	100	0.00
21	CT Methyl tert-Butyl Ether	1.383	1.394	-0.8	100	0.00
22	CT 1,1-Dichloroethane	1.226	0.932	24.0	100	0.00
23	CT Chloroprene	0.734	0.647	11.9	100	0.00
24	CT Ethyl tert-Butyl Ether	1.636	1.325	19.0	100	0.00
25	CT cis-1,2-Dichloroethylene	0.825	0.654	20.7	100	0.00
26	CT Bromochloromethane	0.538	0.322	40.1#	100	0.00
27	CT Chloroform	1.468	1.089	25.8	100	0.00
28	CT 1,1,1-Trichloroethane	1.457	1.102	24.4	100	0.00
29	CT Carbon Tetrachloride	1.299	1.108	14.7	100	0.00
30	CT Benzene	1.975	1.430	27.6	100	0.00
31	CT 1,2-Dichloroethane	0.771	0.655	15.0	100	0.00
32	CT tert-Amyl Methyl Ether	1.504	1.106	26.5	100	0.00
33	ISS IS-1,4-Difluorobenzene	1.000	1.000	0.0	100	0.00
34	CT Trichloroethylene	0.316	0.286	9.5	100	0.00
35	CT Ethyl Acrylate	0.405	0.492	-21.5	100	0.00
36	CT 1,2-Dichloropropane	0.331	0.388	-17.2	100	0.00
37	CT Methyl Methacrylate	0.462	0.612	-32.5#	100	0.00
38	CT Bromodichloromethane	0.591	0.599	-1.4	100	0.00
39	CT cis-1,3-Dichloropropene	0.222	0.245	-10.4	100	0.00
40	CT Methyl Isobutyl Ketone	0.559	0.752	-34.5#	100	0.00
41	CT Toluene	0.835	0.991	-18.7	100	0.00
42	CT n-Octane	0.531	0.783	-47.5#	100	0.00
43	CT trans-1,3-Dichloropropene	0.184	0.192	-4.3	100	0.00
44	CT 1,1,2-Trichloroethane	0.279	0.298	-6.8	100	0.00
45	CT Tetrachloroethylene	0.504	0.437	13.3	100	0.00
46	CT Dibromochloromethane	0.586	0.504	14.0	100	0.00
47	CT 1,2-Dibromoethane	0.220	0.207	5.9	100	0.00

Analytical Standard Record

Eastern Research Group

0D29005

Description:	2.50 ppbv ICV	Expires:	05/29/20
Standard Type:	Calibration Stan	Prepared:	04/29/20
Solvent:	Scientific Air	Prepared By:	Kameron Singer
Final Volume (mls):	6000	Department:	Air Toxics
Vials:	1	Last Edit:	04/29/20 15:19 by KSS

canister# 3234

Analyte	CAS Number	Concentration	Units
Acrolein	107-02-8	0.00248	ppmv
1,1,1-Trichloroethane	71-55-6	0.00253	ppmv
cis-1,2-Dichloroethylene	156-59-2	0.002485	ppmv
Chloroprene	126-99-8	0.00252	ppmv
Chloromethane	74-87-3	0.00253	ppmv
Chloroform	67-66-3	0.00251	ppmv
Chloroethane	75-00-3	0.00249	ppmv
Chlorobenzene	108-90-7	0.0025	ppmv
Carbon Tetrachloride	56-23-5	0.0025	ppmv
Carbon Disulfide	75-15-0	0.002495	ppmv
Bromomethane	74-83-9	0.002505	ppmv
Bromoform	75-25-2	0.002525	ppmv
Bromodichloromethane	75-27-4	0.00254	ppmv
Bromochloromethane	74-97-5	0.002525	ppmv
Dibromochloromethane	124-48-1	0.00259	ppmv
1,2-Dichloroethane	107-06-2	0.002525	ppmv
1,1,2,2-Tetrachloroethane	79-34-5	0.002545	ppmv
1,1,2-Trichloroethane	79-00-5	0.00253	ppmv
1,1-Dichloroethane	75-34-3	0.00248	ppmv
1,1-Dichloroethene	75-35-4	0.0025	ppmv
1,2,4-Trichlorobenzene	120-82-1	0.00249	ppmv
Benzene	71-43-2	0.002535	ppmv
1,2-Dibromoethane	106-93-4	0.002555	ppmv
Acrylonitrile	107-13-1	0.002495	ppmv
1,2-Dichloropropane	78-87-5	0.002535	ppmv
1,3,5-Trimethylbenzene	108-67-8	0.002515	ppmv
1,3-Butadiene	106-99-0	0.00252	ppmv
Acetonitrile	75-05-8	0.002615	ppmv
Acetylene	74-86-2	0.00246	ppmv
Dichlorodifluoromethane	75-71-8	0.002505	ppmv

Reviewed By

Date

Analytical Standard Record

Eastern Research Group

0D29005

1,2,4-Trimethylbenzene	95-63-6	0.00238	ppmv
Naphthalene	91-20-3	0.00248	ppmv
Trichlorotrifluoroethane	76-13-1	0.002515	ppmv
Trichlorofluoromethane	75-69-4	0.0025	ppmv
Trichloroethylene	79-01-6	0.002575	ppmv
trans-1,3-Dichloropropene	10061-02-6	0.002465	ppmv
trans-1,2-Dichloroethylene	156-60-5	0.002545	ppmv
Toluene	108-88-3	0.002485	ppmv
Tetrachloroethylene	127-18-4	0.002515	ppmv
tert-Amyl Methyl Ether	994-05-8	0.00264	ppmv
Styrene	100-42-5	0.00246	ppmv
Propylene	115-07-1	0.00246	ppmv
p-Dichlorobenzene	106-46-7	0.00264	ppmv
o-Xylene	95-47-6	0.002495	ppmv
o-Dichlorobenzene	95-50-1	0.002515	ppmv
cis-1,3-Dichloropropene	10061-01-5	0.00259	ppmv
m,p-Xylene	108-38-3, 106-42-3	0.005	ppmv
Dichloromethane	75-09-2	0.00246	ppmv
Dichlorotetrafluoroethane	76-14-2	0.002525	ppmv
Ethyl Acrylate	140-88-5	0.002585	ppmv
Ethyl tert-Butyl Ether	637-92-3	0.00262	ppmv
Ethylbenzene	100-41-4	0.00255	ppmv
n-Octane	111-65-9	0.00257	ppmv
Hexachloro-1,3-butadiene	87-68-3	0.00255	ppmv
n-Hexane	110-54-3	0.002525	ppmv
m-Dichlorobenzene	541-73-1	0.00242	ppmv
Methyl Ethyl Ketone	78-93-3	0.0026255	ppmv
Methyl Isobutyl Ketone	108-10-1	0.002575	ppmv
Methyl Methacrylate	80-62-6	0.002585	ppmv
Methyl tert-Butyl Ether	1634-04-4	0.00259	ppmv
Vinyl chloride	75-01-4	0.002495	ppmv
Ethylene oxide	75-21-8	0.0025	ppmv

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
9G18011	Ethylene Oxide Secondary Stock	S07/16/19	Mitch Howell	07/16/20	07/18/19 17:21 by MH	15
9J10002	TO-15 Secondary Stock Standard	10/10/19	Mitch Howell	10/03/20	10/17/19 13:31 by KSS	30

Reviewed By

Date

Data Path : C:\gcms\1\data\MS6\W20D\$\
 Data File : W20D\$002.D
 Acq On : 30 Apr 2020 10:52 am
 Operator : KSS
 Sample : 2004066-CCV1
 Misc : 0D29005
 ALS Vial : 2 Sample Multiplier: 1

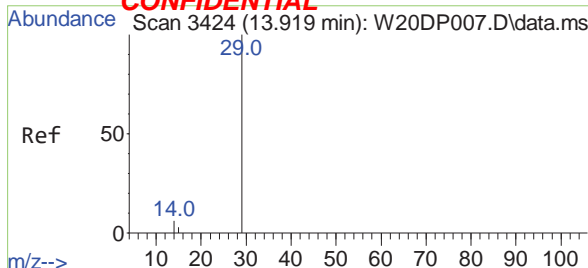
Quant Time: Apr 30 12:12:08 2020
 Quant Method : D:\MassHunter\GCMS\1\methods\0040005.M
 Quant Title : TO-15 by Selective Ion Analysis
 QLast Update : Fri Apr 17 10:28:48 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) IS-Hexane-d14	18.360	66	54720	5.1840	ppbv	-0.04
33) IS-1,4-Difluorobenzene	21.396	114	90267	5.3120	ppbv	-0.02
48) IS-Chlorobenzene-d5	25.352	117	54547	5.0560	ppbv	0.00

System Monitoring Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Acetylene	4.259	26	7265	2.0004	ppbv	100
3) Propylene/Propane	7.182	41	7205	1.8687	ppbv	99
4) Dichlorodifluoromethane	8.265	85	25878	1.4523	ppbv #	95
5) Chloromethane	10.758	50	12732	1.8008	ppbv	97
6) Dichlorotetrafluoroethane	10.815	85	28094	1.6151	ppbv	89
7) Vinyl Chloride	11.992	62	8813	1.7455	ppbv	100
8) 1,3-Butadiene	12.377	54	5661	1.9396	ppbv	96
9) Bromomethane	13.828	94	9155	1.6231	ppbv	99
10) Ethylene oxide	13.868	29	4081m	1.9733	ppbv	
11) Chloroethane	14.425	64	4604	1.9600	ppbv	99
12) Trichlorofluoromethane	15.322	101	38049	1.8008	ppbv	100
13) Acrolein	16.504	56	4617	1.5132	ppbv #	94
14) 1,1-Dichloroethene	16.639	61	22447	2.2623	ppbv	84
15) Trichlorotrifluoroethane	16.759	101	33065	1.8612	ppbv	96
16) Carbon Disulfide	16.940	76	40014	1.7485	ppbv	100
17) Acetonitrile	17.395	41	9133	1.7463	ppbv	96
18) Methylene Chloride	17.697	49	15142	2.4898	ppbv	83
19) Acrylonitrile	18.118	53	10395	2.2630	ppbv	100
20) trans-1,2-Dichloroethy...	18.153	96	16924	2.2363	ppbv	90
21) Methyl tert-Butyl Ether	18.165	73	38118	2.6117	ppbv	98
22) 1,1-Dichloroethane	18.858	63	24407	1.8853	ppbv	99
23) Chloroprene	18.953	53	17199	2.2205	ppbv	89
24) Ethyl tert-Butyl Ether	19.451	59	36630	2.1214	ppbv	97
25) cis-1,2-Dichloroethylene	19.694	61	17160	1.9704	ppbv	91
26) Bromochloromethane	20.019	128	8571	1.5101	ppbv #	81
27) Chloroform	20.156	83	28844	1.8620	ppbv	100
28) 1,1,1-Trichloroethane	20.380	97	29422	1.9130	ppbv	93
29) Carbon Tetrachloride	20.589	117	29235	2.1314	ppbv	99
30) Benzene	20.863	78	38270	1.8359	ppbv	99
31) 1,2-Dichloroethane	20.928	62	17466	2.1454	ppbv	98
32) tert-Amyl Methyl Ether	21.029	73	30813	1.9406	ppbv	99
34) Trichloroethylene	21.721	130	12526	2.3353	ppbv	88
35) Ethyl Acrylate	21.781	55	21607	3.1359	ppbv	98
36) 1,2-Dichloropropane	22.067	63	16698	2.9674	ppbv	78
37) Methyl Methacrylate	22.078	41	26877	3.4272	ppbv	88
38) Bromodichloromethane	22.402	83	25851	2.5734	ppbv	100
39) cis-1,3-Dichloropropene	22.969	75	10801	2.8640	ppbv #	77
40) Methyl Isobutyl Ketone	23.141	43	32887	3.4649	ppbv	96
41) Toluene	23.434	91	41859	2.9486	ppbv	99
42) n-Octane	23.529	43	34207	3.7937	ppbv	90
43) trans-1,3-Dichloropropene	23.707	75	8052	2.5763	ppbv	81
44) 1,1,2-Trichloroethane	23.987	97	12801	2.7009	ppbv	92
45) Tetrachloroethylene	24.140	166	18688	2.1836	ppbv	97
46) Dibromochloromethane	24.534	129	21425	2.1530	ppbv	99
47) 1,2-Dibromoethane	24.724	107	8975	2.4000	ppbv	98

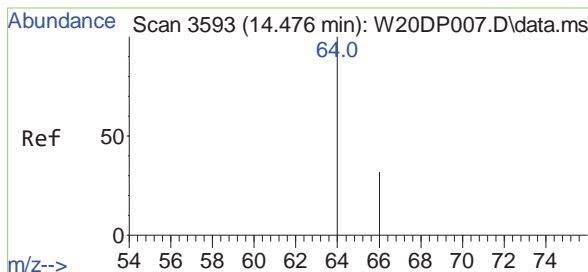
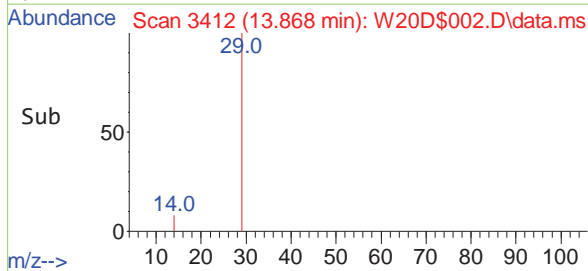
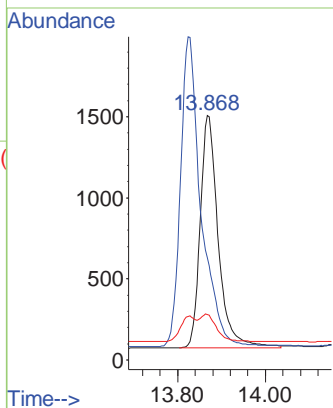
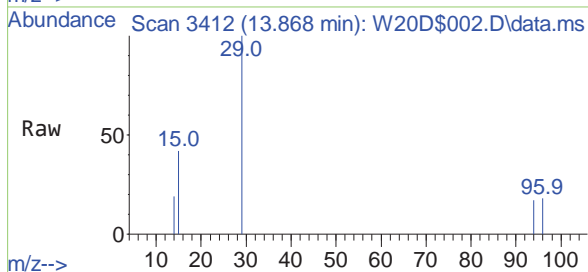
CONFIDENTIAL



#10
Ethylene oxide
 Concen: 1.973 ppbv m
 RT: 13.868 min Scan# 3412
 Delta R.T. -0.052 min
 Lab File: W20D\$002.D
 Acq: 30 Apr 2020 10:52 am

Tgt Ion: 29 Resp: 4081

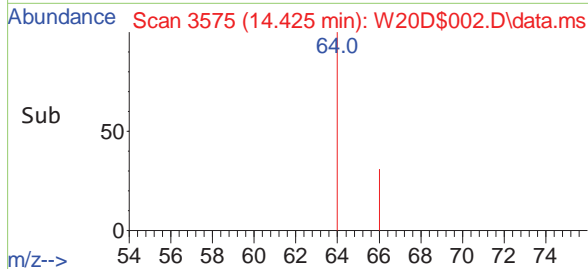
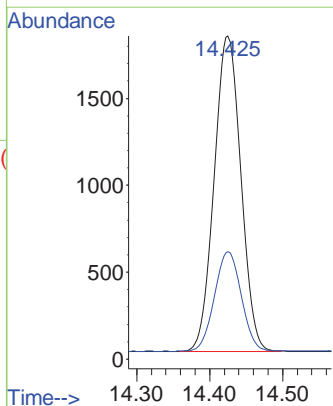
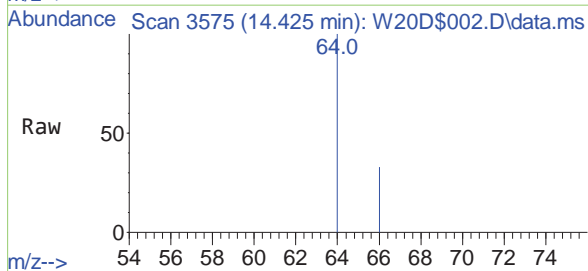
Ion	Ratio	Lower	Upper
29	100		
15	13.4	9.4	17.4
14	7.2	5.5	10.3



#11
 Chloroethane
 Concen: 1.960 ppbv
 RT: 14.425 min Scan# 3575
 Delta R.T. -0.051 min
 Lab File: W20D\$002.D
 Acq: 30 Apr 2020 10:52 am

Tgt Ion: 64 Resp: 4604

Ion	Ratio	Lower	Upper
64	100		
66	31.4	22.5	41.9



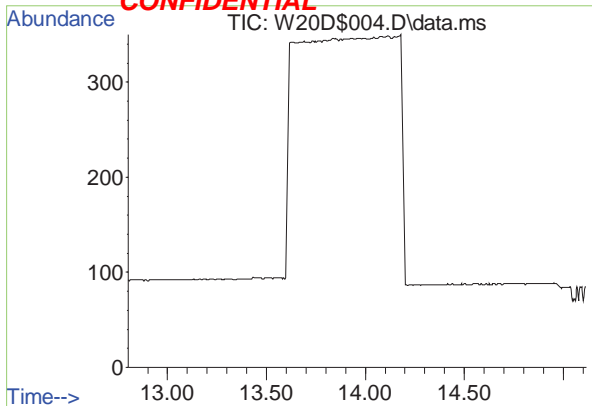
Data Path : C:\gcms\1\data\MS6\W20D\$\
 Data File : W20D\$004.D
 Acq On : 30 Apr 2020 12:43 pm
 Operator : KSS
 Sample : B0D2907-BLK1
 Misc : T-H1-841
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 01 10:14:58 2020
 Quant Method : D:\MassHunter\GCMS\1\methods\0040005.M
 Quant Title : T0-15 by Selective Ion Analysis
 QLast Update : Fri Apr 17 10:28:48 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) IS-Hexane-d14	18.372	66	55495	5.1840	ppbv	-0.02
33) IS-1,4-Difluorobenzene	21.402	114	87382	5.3120	ppbv	-0.01
48) IS-Chlorobenzene-d5	25.354	117	39922	5.0560	ppbv	0.00

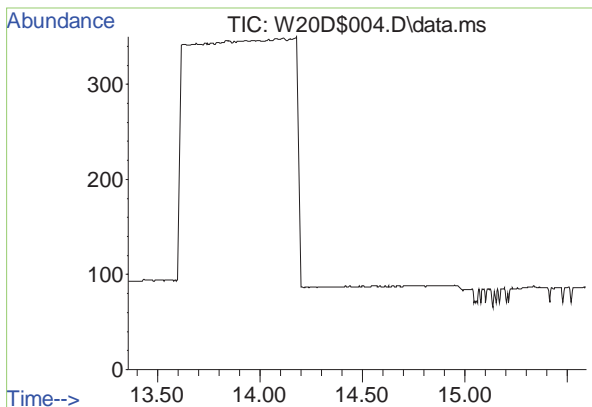
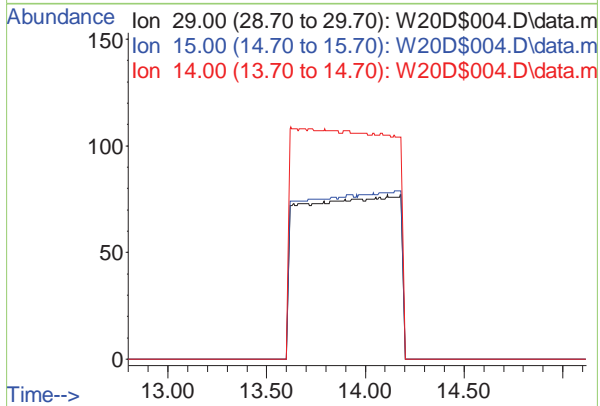
System Monitoring Compounds

Target Compounds					Qvalue
2) Acetylene	0.000	26	0	N.D.	
3) Propylene/Propane	0.000	41	0	N.D.	
4) Dichlorodifluoromethane	0.000	85	0	N.D.	
5) Chloromethane	0.000	50	0	N.D.	
6) Dichlorotetrafluoroethane	0.000	85	0	N.D.	
7) Vinyl Chloride	0.000	62	0	N.D.	
8) 1,3-Butadiene	0.000	54	0	N.D.	
9) Bromomethane	0.000	94	0	N.D.	
10) Ethylene oxide	0.000	29	0	N.D.	
11) Chloroethane	0.000	64	0	N.D.	
12) Trichlorofluoromethane	0.000	101	0	N.D. d	
13) Acrolein	16.556	56	37	0.0120 ppbv #	72
14) 1,1-Dichloroethene	0.000	61	0	N.D.	
15) Trichlorotrifluoroethane	16.765	101	42	0.0023 ppbv	98
16) Carbon Disulfide	16.951	76	168	0.0072 ppbv	100
17) Acetonitrile	0.000	41	0	N.D.	
18) Methylene Chloride	0.000	49	0	N.D.	
19) Acrylonitrile	0.000	53	0	N.D.	
20) trans-1,2-Dichloroethy...	0.000	96	0	N.D.	
21) Methyl tert-Butyl Ether	0.000	73	0	N.D.	
22) 1,1-Dichloroethane	0.000	63	0	N.D.	
23) Chloroprene	0.000	53	0	N.D.	
24) Ethyl tert-Butyl Ether	0.000	59	0	N.D.	
25) cis-1,2-Dichloroethylene	0.000	61	0	N.D.	
26) Bromochloromethane	0.000	128	0	N.D.	
27) Chloroform	0.000	83	0	N.D.	
28) 1,1,1-Trichloroethane	0.000	97	0	N.D.	
29) Carbon Tetrachloride	0.000	117	0	N.D.	
30) Benzene	20.863	78	75	0.0035 ppbv	96
31) 1,2-Dichloroethane	0.000	62	0	N.D.	
32) tert-Amyl Methyl Ether	0.000	73	0	N.D.	
34) Trichloroethylene	0.000	130	0	N.D.	
35) Ethyl Acrylate	0.000	55	0	N.D.	
36) 1,2-Dichloropropane	0.000	63	0	N.D.	
37) Methyl Methacrylate	0.000	41	0	N.D.	
38) Bromodichloromethane	0.000	83	0	N.D.	
39) cis-1,3-Dichloropropene	0.000	75	0	N.D.	
40) Methyl Isobutyl Ketone	0.000	43	0	N.D.	
41) Toluene	23.427	91	15	0.0011 ppbv #	26
42) n-Octane	0.000	43	0	N.D.	
43) trans-1,3-Dichloropropene	0.000	75	0	N.D.	
44) 1,1,2-Trichloroethane	0.000	97	0	N.D.	
45) Tetrachloroethylene	0.000	166	0	N.D.	
46) Dibromochloromethane	0.000	129	0	N.D.	
47) 1,2-Dibromoethane	0.000	107	0	N.D. d	



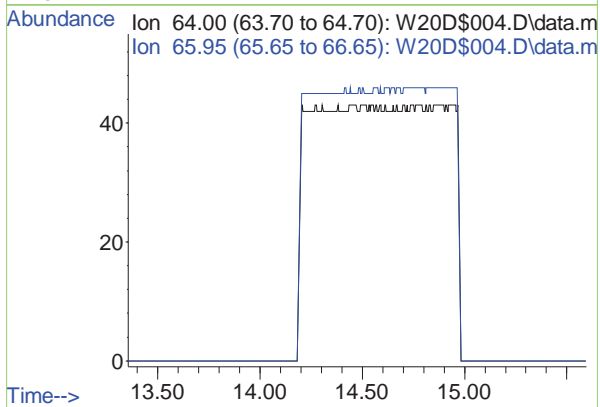
#10
Ethylene oxide
 Concen: N.D.
 Expected RT: 13.92 min
 Lab File: W20D\$004.D
 Acq: 30 Apr 2020 12:43 pm
 Tgt Ion: 29

Sig	Exp Ratio
29	100
15	13.4
14	7.9



#11
 Chloroethane
 Concen: N.D.
 Expected RT: 14.48 min
 Lab File: W20D\$004.D
 Acq: 30 Apr 2020 12:43 pm
 Tgt Ion: 64

Sig	Exp Ratio
64	100
66	32.2



KSS
5/14/20

Method Path : D:\MassHunter\GCMS\1\methods\
 Method File : 0050004.M
 Title : T0-15 by Selective Ion Analysis
 Last Update : Thu May 14 10:04:26 2020
 Response Via : Initial Calibration

Calibration Files

1 =W20EM004.D 2 =W20EM005.D 3 =W20EM006.D 4 =W20EM007.D 5 =W20EM008.D 6 =W20EM009.D

Compound	1	2	3	4	5	6	Avg	%RSD

1) ISS IS-Hexane-d14	-----ISTD-----							
2) CT Acetylene	0.200	0.228	0.209	0.192	0.181	0.191	0.200	8.14
3) CT Propylene/Propane	0.303	0.334	0.303	0.273	0.260	0.268	0.290	9.70
4) CT Dichlorodifluo...	1.083	1.233	1.137	1.030	0.973	1.011	1.078	8.84
5) CT Chloromethane	0.461	0.508	0.461	0.411	0.386	0.398	0.438	10.74
6) CT Dichlorotetra...	1.299	1.479	1.361	1.215	1.163	1.215	1.289	9.06
7) CT Vinyl Chloride	0.479	0.548	0.504	0.443	0.399	0.398	0.462	12.89
8) CT 1,3-Butadiene	0.361	0.413	0.382	0.326	0.274	0.242	0.333	19.65
9) CT Bromomethane	0.572	0.651	0.603	0.542	0.488	0.458	0.552	12.99
10) CT Ethylene oxide	0.082	0.081	0.077	0.095	0.096	0.091	0.087	9.25
11) CT Chloroethane	0.191	0.220	0.204	0.186	0.175	0.153	0.188	12.23
12) CT Trichlorofluor...	0.993	1.136	1.051	0.939	0.858	0.815	0.965	12.42
13) CT Acrolein	0.175	0.192	0.158	0.157	0.139	0.144	0.161	12.23
14) CT 1,1-Dichloroet...	0.480	0.551	0.512	0.471	0.442	0.423	0.480	9.74
15) CT Trichlorotrifl...	0.913	1.038	0.956	0.891	0.822	0.844	0.911	8.64
16) CT Carbon Disulfide	1.245	1.437	1.332	1.207	1.140	1.092	1.242	10.20
17) CT Acetonitrile	0.259	0.252	0.240	0.225	0.208	0.221	0.234	8.35
18) CT Methylene Chlo...	0.268	0.306	0.287	0.260	0.245	0.257	0.271	8.17
19) CT Acrylonitrile	0.398	0.440	0.414	0.390	0.387	0.357	0.398	7.04
20) CT trans-1,2-Dich...	0.641	0.686	0.648	0.590	0.561	0.580	0.618	7.80
21) CT Methyl tert-Bu...	1.240	1.446	1.316	1.282	1.138	1.175	1.266	8.70
22) CT 1,1-Dichloroet...	0.839	0.962	0.898	0.847	0.788	0.816	0.858	7.31
23) CT Chloroprene	0.552	0.638	0.600	0.571	0.540	0.568	0.578	6.19
24) CT Ethyl tert-But...	1.410	1.621	1.476	1.438	1.292	1.339	1.429	8.07
25) CT cis-1,2-Dichlo...	0.602	0.695	0.650	0.617	0.577	0.605	0.624	6.70
26) CT Bromochloromet...	0.489	0.560	0.521	0.494	0.463	0.488	0.502	6.66
27) CT Chloroform	0.978	1.122	1.052	1.010	0.934	0.978	1.012	6.57
28) CT 1,1,1-Trichlor...	0.960	1.096	1.020	0.973	0.890	0.929	0.978	7.40
29) CT Carbon Tetrach...	0.861	0.996	0.928	0.877	0.810	0.856	0.888	7.35
30) CT Benzene	1.803	2.047	1.908	1.830	1.666	1.725	1.830	7.41
31) CT 1,2-Dichloroet...	0.356	0.412	0.388	0.392	0.371	0.406	0.388	5.46
32) CT tert-Amyl Meth...	1.431	1.631	1.490	1.448	1.309	1.385	1.449	7.48

33) ISS IS-1,4-Difluoroben...	-----ISTD-----							
34) CT Trichloroethylene	0.327	0.375	0.344	0.333	0.318	0.356	0.342	6.12
35) CT Ethyl Acrylate	0.338	0.376	0.343	0.342	0.333	0.366	0.349	4.95
36) CT 1,2-Dichloropr...	0.275	0.311	0.283	0.265	0.240	0.244	0.270	9.74
37) CT Methyl Methacr...	0.306	0.335	0.289	0.277	0.253	0.260	0.287	10.65
38) CT Bromodichlorom...	0.377	0.427	0.396	0.384	0.359	0.379	0.387	5.94
39) CT cis-1,3-Dichlo...	0.173	0.198	0.185	0.193	0.195	0.235	0.196	10.73
40) CT Methyl Isobuty...	0.446	0.485	0.441	0.411	0.374	0.383	0.423	9.85
41) CT Toluene	0.889	1.019	0.951	0.910	0.835	0.853	0.909	7.45
42) CT n-Octane	0.441	0.513	0.480	0.458	0.417	0.424	0.455	7.92
43) CT trans-1,3-Dich...	0.128	0.138	0.122	0.122	0.125	0.163	0.133	11.86
44) CT 1,1,2-Trichlor...	0.245	0.281	0.261	0.256	0.246	0.267	0.259	5.27
45) CT Tetrachloroeth...	0.517	0.596	0.556	0.535	0.495	0.512	0.535	6.77
46) CT Dibromochlorom...	0.420	0.484	0.456	0.459	0.444	0.493	0.459	5.79
47) CT 1,2-Dibromoethane	0.195	0.218	0.201	0.212	0.219	0.286	0.222	14.82

48) ISS IS-Chlorobenzene-d5	-----ISTD-----							
49) CT Chlorobenzene	0.852	0.957	0.883	0.839	0.780	0.821	0.855	7.08
50) CT Ethylbenzene	1.447	1.637	1.502	1.377	1.227	1.242	1.405	11.20
51) CT m,p-Xylene	1.241	1.400	1.278	1.171	1.038	1.029	1.193	12.06

DIST
6/13/20

Data Path : C:\gcms\1\data\MS6\W20EN\
 Data File : W20EN003.D
 Acq On : 14 May 2020 02:34 pm
 Operator : KSS
 Sample : 2005016-CCV1
 Misc : 0D29006
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 14 15:27:54 2020
 Quant Method : D:\MassHunter\GCMS\1\methods\0050004.M
 Quant Title : TO-15 by Selective Ion Analysis
 QLast Update : Thu May 14 10:04:26 2020
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.30min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	ISS IS-Hexane-d14	1.000	1.000	0.0	100	0.00
2	CT Acetylene	0.200	0.191	4.5	100	0.00
3	CT Propylene/Propane	0.290	0.300	-3.4	100	0.00
4	CT Dichlorodifluoromethane	1.078	1.004	6.9	100	0.00
5	CT Chloromethane	0.438	0.427	2.5	100	0.00
6	CT Dichlorotetrafluoroethane	1.289	1.361	-5.6	100	0.00
7	CT Vinyl Chloride	0.462	0.455	1.5	100	0.00
8	CT 1,3-Butadiene	0.333	0.308	7.5	100	0.00
9	CT Bromomethane	0.552	0.553	-0.2	100	0.00
10	CT Ethylene oxide	0.087	0.102	-17.2	100	0.00
11	CT Chloroethane	0.188	0.197	-4.8	100	0.00
12	CT Trichlorofluoromethane	0.965	0.876	9.2	100	0.00
13	CT Acrolein	0.161	0.121	24.8	100	0.00
14	CT 1,1-Dichloroethene	0.480	0.493	-2.7	100	0.00
15	CT Trichlorotrifluoroethane	0.911	0.913	-0.2	100	0.00
16	CT Carbon Disulfide	1.242	1.201	3.3	100	0.00
17	CT Acetonitrile	0.234	0.186	20.5	100	0.00
18	CT Methylene Chloride	0.271	0.280	-3.3	100	0.00
19	CT Acrylonitrile	0.398	0.348	12.6	100	0.00
20	CT trans-1,2-Dichloroethylene	0.618	0.592	4.2	100	0.00
21	CT Methyl tert-Butyl Ether	1.266	1.226	3.2	100	0.00
22	CT 1,1-Dichloroethane	0.858	0.866	-0.9	100	0.00
23	CT Chloroprene	0.578	0.586	-1.4	100	0.00
24	CT Ethyl tert-Butyl Ether	1.429	1.417	0.8	100	0.00
25	CT cis-1,2-Dichloroethylene	0.624	0.610	2.2	100	0.00
26	CT Bromochloromethane	0.502	0.466	7.2	100	0.00
27	CT Chloroform	1.012	1.042	-3.0	100	0.00
28	CT 1,1,1-Trichloroethane	0.978	0.965	1.3	100	0.00
29	CT Carbon Tetrachloride	0.888	1.026	-15.5	100	0.00
30	CT Benzene	1.830	1.913	-4.5	100	0.00
31	CT 1,2-Dichloroethane	0.388	0.378	2.6	100	0.00
32	CT tert-Amyl Methyl Ether	1.449	1.387	4.3	100	0.00
33	ISS IS-1,4-Difluorobenzene	1.000	1.000	0.0	100	0.00
34	CT Trichloroethylene	0.342	0.300	12.3	100	0.00
35	CT Ethyl Acrylate	0.349	0.317	9.2	100	0.00
36	CT 1,2-Dichloropropane	0.270	0.258	4.4	100	0.00
37	CT Methyl Methacrylate	0.287	0.258	10.1	100	0.00
38	CT Bromodichloromethane	0.387	0.331	14.5	100	0.00
39	CT cis-1,3-Dichloropropene	0.196	0.186	5.1	100	0.00
40	CT Methyl Isobutyl Ketone	0.423	0.395	6.6	100	0.00
41	CT Toluene	0.909	0.944	-3.9	100	0.00
42	CT n-Octane	0.455	0.452	0.7	100	0.00
43	CT trans-1,3-Dichloropropene	0.133	0.111	16.5	100	0.00
44	CT 1,1,2-Trichloroethane	0.259	0.249	3.9	100	0.00
45	CT Tetrachloroethylene	0.535	0.528	1.3	100	0.00
46	CT Dibromochloromethane	0.459	0.431	6.1	100	0.00
47	CT 1,2-Dibromoethane	0.222	0.190	14.4	100	0.00

Analytical Standard Record

Eastern Research Group

0D29006

Description:	2.50 ppbv ICV	Expires:	05/29/20
Standard Type:	Calibration Stan	Prepared:	04/29/20
Solvent:	Scientific Air	Prepared By:	Kameron Singer
Final Volume (mls):	6000	Department:	Air Toxics
Vials:	1	Last Edit:	04/29/20 15:19 by KSS

canister# 3234

Analyte	CAS Number	Concentration	Units
Acrolein	107-02-8	0.00248	ppmv
1,1,1-Trichloroethane	71-55-6	0.00253	ppmv
cis-1,2-Dichloroethylene	156-59-2	0.002485	ppmv
Chloroprene	126-99-8	0.00252	ppmv
Chloromethane	74-87-3	0.00253	ppmv
Chloroform	67-66-3	0.00251	ppmv
Chloroethane	75-00-3	0.00249	ppmv
Chlorobenzene	108-90-7	0.0025	ppmv
Carbon Tetrachloride	56-23-5	0.0025	ppmv
Carbon Disulfide	75-15-0	0.002495	ppmv
Bromomethane	74-83-9	0.002505	ppmv
Bromoform	75-25-2	0.002525	ppmv
Bromodichloromethane	75-27-4	0.00254	ppmv
Bromochloromethane	74-97-5	0.002525	ppmv
Dibromochloromethane	124-48-1	0.00259	ppmv
1,2-Dichloroethane	107-06-2	0.002525	ppmv
1,1,2,2-Tetrachloroethane	79-34-5	0.002545	ppmv
1,1,2-Trichloroethane	79-00-5	0.00253	ppmv
1,1-Dichloroethane	75-34-3	0.00248	ppmv
1,1-Dichloroethene	75-35-4	0.0025	ppmv
1,2,4-Trichlorobenzene	120-82-1	0.00249	ppmv
Benzene	71-43-2	0.002535	ppmv
1,2-Dibromoethane	106-93-4	0.002555	ppmv
Acrylonitrile	107-13-1	0.002495	ppmv
1,2-Dichloropropane	78-87-5	0.002535	ppmv
1,3,5-Trimethylbenzene	108-67-8	0.002515	ppmv
1,3-Butadiene	106-99-0	0.00252	ppmv
Acetonitrile	75-05-8	0.002615	ppmv
Acetylene	74-86-2	0.00246	ppmv
Dichlorodifluoromethane	75-71-8	0.002505	ppmv

Reviewed By

Date

Analytical Standard Record

Eastern Research Group

0D29006

1,2,4-Trimethylbenzene	95-63-6	0.00238	ppmv
Naphthalene	91-20-3	0.00248	ppmv
Trichlorotrifluoroethane	76-13-1	0.002515	ppmv
Trichlorofluoromethane	75-69-4	0.0025	ppmv
Trichloroethylene	79-01-6	0.002575	ppmv
trans-1,3-Dichloropropene	10061-02-6	0.002465	ppmv
trans-1,2-Dichloroethylene	156-60-5	0.002545	ppmv
Toluene	108-88-3	0.002485	ppmv
Tetrachloroethylene	127-18-4	0.002515	ppmv
tert-Amyl Methyl Ether	994-05-8	0.00264	ppmv
Styrene	100-42-5	0.00246	ppmv
Propylene	115-07-1	0.00246	ppmv
p-Dichlorobenzene	106-46-7	0.00264	ppmv
o-Xylene	95-47-6	0.002495	ppmv
o-Dichlorobenzene	95-50-1	0.002515	ppmv
cis-1,3-Dichloropropene	10061-01-5	0.00259	ppmv
m,p-Xylene	108-38-3, 106-42-3	0.005	ppmv
Dichloromethane	75-09-2	0.00246	ppmv
Dichlorotetrafluoroethane	76-14-2	0.002525	ppmv
Ethyl Acrylate	140-88-5	0.002585	ppmv
Ethyl tert-Butyl Ether	637-92-3	0.00262	ppmv
Ethylbenzene	100-41-4	0.00255	ppmv
n-Octane	111-65-9	0.00257	ppmv
Hexachloro-1,3-butadiene	87-68-3	0.00255	ppmv
n-Hexane	110-54-3	0.002525	ppmv
m-Dichlorobenzene	541-73-1	0.00242	ppmv
Methyl Ethyl Ketone	78-93-3	0.0026255	ppmv
Methyl Isobutyl Ketone	108-10-1	0.002575	ppmv
Methyl Methacrylate	80-62-6	0.002585	ppmv
Methyl tert-Butyl Ether	1634-04-4	0.00259	ppmv
Vinyl chloride	75-01-4	0.002495	ppmv
Ethylene oxide	75-21-8	0.0025	ppmv

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
9G18011	Ethylene Oxide Secondary Stock	S07/16/19	Mitch Howell	07/16/20	07/18/19 17:21 by MH	15
9J10002	TO-15 Secondary Stock Standard	10/10/19	Mitch Howell	10/03/20	10/17/19 13:31 by KSS	30

Reviewed By

Date

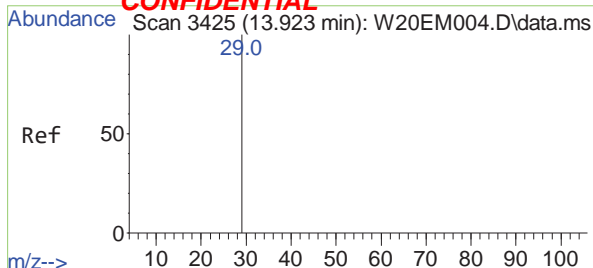
Data Path : C:\gcms\1\data\MS6\W20EN\
 Data File : W20EN003.D
 Acq On : 14 May 2020 02:34 pm
 Operator : KSS
 Sample : 2005016-CCV1
 Misc : 0D29006
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 14 15:27:54 2020
 Quant Method : D:\MassHunter\GCMS\1\methods\0050004.M
 Quant Title : TO-15 by Selective Ion Analysis
 QLast Update : Thu May 14 10:04:26 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) IS-Hexane-d14	18.378	66	198713	5.1840	ppbv	0.00
33) IS-1,4-Difluorobenzene	21.400	114	542654	5.3120	ppbv	0.00
48) IS-Chlorobenzene-d5	25.353	117	354766	5.0560	ppbv	0.00

System Monitoring Compounds

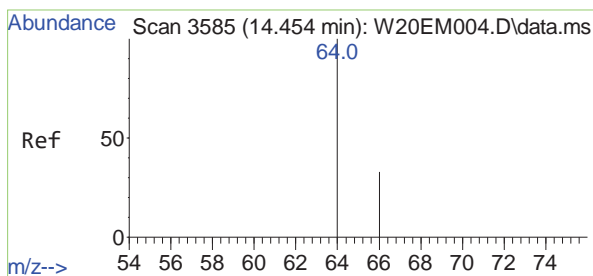
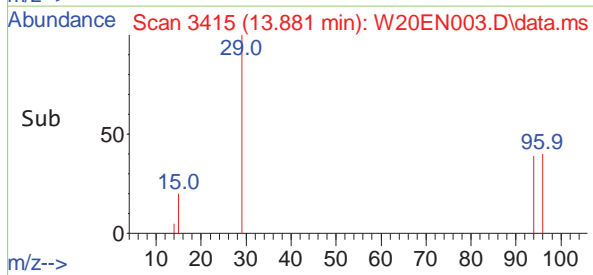
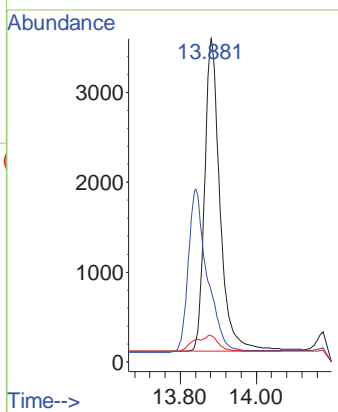
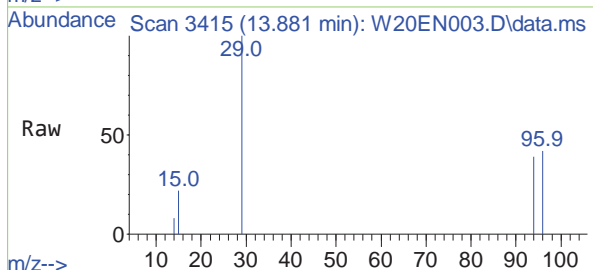
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Acetylene	4.268	26	18045	2.3504	ppbv	100
3) Propylene/Propane	7.182	41	28294	2.5445	ppbv	98
4) Dichlorodifluoromethane	8.268	85	96433	2.3344	ppbv #	98
5) Chloromethane	10.761	50	41446	2.4707	ppbv	99
6) Dichlorotetrafluoroethane	10.822	85	131698	2.6658	ppbv	99
7) Vinyl Chloride	11.994	62	43553	2.4599	ppbv	100
8) 1,3-Butadiene	12.388	54	29770	2.3330	ppbv	98
9) Bromomethane	13.841	94	53068	2.5069	ppbv	97
10) Ethylene oxide	13.881	29	9789m	2.9370	ppbv	
11) Chloroethane	14.439	64	18817	2.6099	ppbv	100
12) Trichlorofluoromethane	15.335	101	83919	2.2682	ppbv	100
13) Acrolein	16.518	56	11464	1.8593	ppbv	98
14) 1,1-Dichloroethene	16.653	61	47231	2.5686	ppbv	98
15) Trichlorotrifluoroethane	16.773	101	88045	2.5214	ppbv	98
16) Carbon Disulfide	16.954	76	114904	2.4132	ppbv	100
17) Acetonitrile	17.408	41	18622	2.0741	ppbv	97
18) Methylene Chloride	17.710	49	26437	2.5482	ppbv	98
19) Acrylonitrile	18.130	53	33315	2.1856	ppbv	98
20) trans-1,2-Dichloroethy...	18.165	96	57743	2.4387	ppbv	93
21) Methyl tert-Butyl Ether	18.177	73	121668	2.5064	ppbv	100
22) 1,1-Dichloroethane	18.870	63	82289	2.5014	ppbv	100
23) Chloroprene	18.965	53	56611	2.5542	ppbv	100
24) Ethyl tert-Butyl Ether	19.463	59	142303	2.5974	ppbv	98
25) cis-1,2-Dichloroethylene	19.702	61	58097	2.4274	ppbv	99
26) Bromochloromethane	20.033	128	45060	2.3398	ppbv	100
27) Chloroform	20.163	83	100261	2.5837	ppbv	100
28) 1,1,1-Trichloroethane	20.387	97	93622	2.4971	ppbv	99
29) Carbon Tetrachloride	20.596	117	98326	2.8884	ppbv	99
30) Benzene	20.871	78	185904	2.6503	ppbv	100
31) 1,2-Dichloroethane	20.928	62	36576	2.4621	ppbv	100
32) tert-Amyl Methyl Ether	21.029	73	140323	2.5262	ppbv	100
34) Trichloroethylene	21.730	130	78909	2.2567	ppbv	98
35) Ethyl Acrylate	21.785	55	83820	2.3478	ppbv	99
36) 1,2-Dichloropropane	22.071	63	66892	2.4290	ppbv	95
37) Methyl Methacrylate	22.082	41	68236	2.3288	ppbv	93
38) Bromodichloromethane	22.406	83	85758	2.1691	ppbv	100
39) cis-1,3-Dichloropropene	22.968	75	49317	2.4578	ppbv	100
40) Methyl Isobutyl Ketone	23.139	43	103916	2.4027	ppbv	100
41) Toluene	23.432	91	239588	2.5787	ppbv	100
42) n-Octane	23.534	43	118681	2.5509	ppbv	100
43) trans-1,3-Dichloropropene	23.706	75	27973	2.0633	ppbv	98
44) 1,1,2-Trichloroethane	23.992	97	64368	2.4307	ppbv	99
45) Tetrachloroethylene	24.139	166	135650	2.4806	ppbv	100
46) Dibromochloromethane	24.532	129	110200	2.3483	ppbv	100
47) 1,2-Dibromoethane	24.725	107	49654	2.1909	ppbv	100



#10
Ethylene oxide
 Concen: 2.937 ppbv m
 RT: 13.881 min Scan# 3415
 Delta R.T. -0.012 min
 Lab File: W20EN003.D
 Acq: 14 May 2020 02:34 pm

Tgt Ion: 29 Resp: 9789

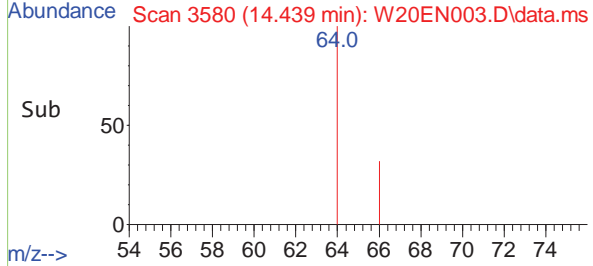
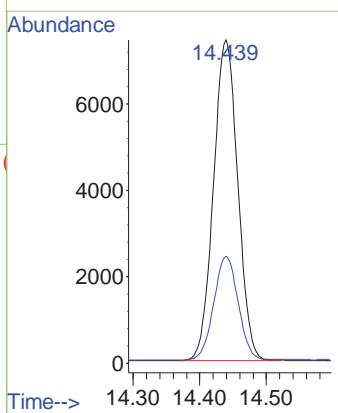
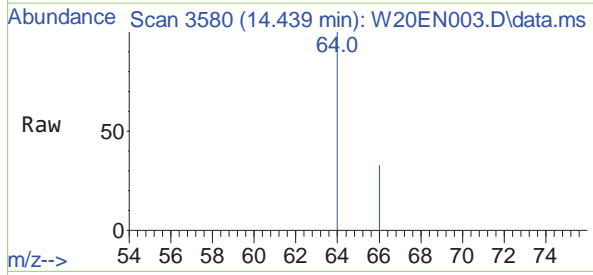
Ion	Ratio	Lower	Upper
29	100		
15	11.7	10.6	19.6
14	4.9	2.7	4.9



#11
 Chloroethane
 Concen: 2.610 ppbv
 RT: 14.439 min Scan# 3580
 Delta R.T. -0.012 min
 Lab File: W20EN003.D
 Acq: 14 May 2020 02:34 pm

Tgt Ion: 64 Resp: 18817

Ion	Ratio	Lower	Upper
64	100		
66	32.3	22.8	42.4



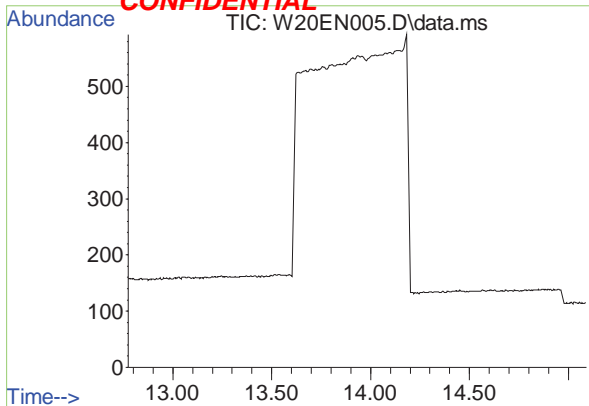
Data Path : C:\gcms\1\data\MS6\W20EN\
 Data File : W20EN005.D
 Acq On : 14 May 2020 04:25 pm
 Operator : KSS
 Sample : B0E0607-BLK1
 Misc : T-H1-841
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 15 09:46:56 2020
 Quant Method : D:\MassHunter\GCMS\1\methods\0050004.M
 Quant Title : T0-15 by Selective Ion Analysis
 QLast Update : Thu May 14 10:04:26 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) IS-Hexane-d14	18.375	66	195043	5.1840	ppbv	0.00
33) IS-1,4-Difluorobenzene	21.402	114	495972	5.3120	ppbv	0.00
48) IS-Chlorobenzene-d5	25.351	117	269578	5.0560	ppbv	0.00

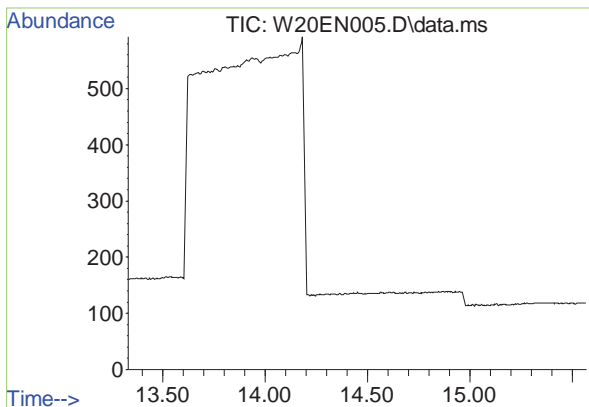
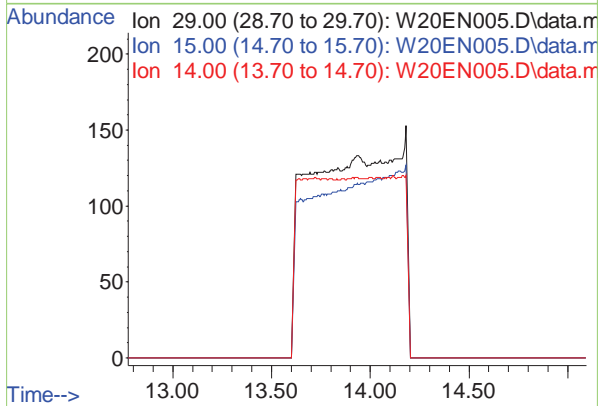
System Monitoring Compounds

Target Compounds					Qvalue
2) Acetylene	0.000	26	0	N.D.	
3) Propylene/Propane	7.176	41	271m	0.0248	ppbv
4) Dichlorodifluoromethane	0.000	85	0	N.D.	
5) Chloromethane	0.000	50	0	N.D.	
6) Dichlorotetrafluoroethane	0.000	85	0	N.D.	
7) Vinyl Chloride	0.000	62	0	N.D.	
8) 1,3-Butadiene	0.000	54	0	N.D.	
9) Bromomethane	0.000	94	0	N.D.	
10) Ethylene oxide	0.000	29	0	N.D.	
11) Chloroethane	0.000	64	0	N.D.	
12) Trichlorofluoromethane	0.000	101	0	N.D.	
13) Acrolein	16.541	56	560	0.0925	ppbv 98
14) 1,1-Dichloroethene	0.000	61	0	N.D.	
15) Trichlorotrifluoroethane	16.773	101	69	0.0020	ppbv 97
16) Carbon Disulfide	16.954	76	412	0.0088	ppbv 100
17) Acetonitrile	17.439	41	55	0.0062	ppbv # 28
18) Methylene Chloride	0.000	49	0	N.D.	
19) Acrylonitrile	18.150	53	92	0.0061	ppbv 94
20) trans-1,2-Dichloroethy...	0.000	96	0	N.D.	
21) Methyl tert-Butyl Ether	0.000	73	0	N.D.	d
22) 1,1-Dichloroethane	0.000	63	0	N.D.	
23) Chloroprene	0.000	53	0	N.D.	
24) Ethyl tert-Butyl Ether	0.000	59	0	N.D.	
25) cis-1,2-Dichloroethylene	0.000	61	0	N.D.	d
26) Bromochloromethane	0.000	128	0	N.D.	
27) Chloroform	0.000	83	0	N.D.	
28) 1,1,1-Trichloroethane	0.000	97	0	N.D.	
29) Carbon Tetrachloride	0.000	117	0	N.D.	
30) Benzene	20.865	78	345	0.0050	ppbv 95
31) 1,2-Dichloroethane	0.000	62	0	N.D.	
32) tert-Amyl Methyl Ether	0.000	73	0	N.D.	
34) Trichloroethylene	21.726	130	156	0.0049	ppbv # 54
35) Ethyl Acrylate	0.000	55	0	N.D.	d
36) 1,2-Dichloropropane	0.000	63	0	N.D.	
37) Methyl Methacrylate	22.095	41	627	0.0234	ppbv # 26
38) Bromodichloromethane	0.000	83	0	N.D.	
39) cis-1,3-Dichloropropene	0.000	75	0	N.D.	
40) Methyl Isobutyl Ketone	23.154	43	156	0.0039	ppbv 99
41) Toluene	23.434	91	113	0.0013	ppbv 97
42) n-Octane	23.536	43	135	0.0032	ppbv # 65
43) trans-1,3-Dichloropropene	23.752	75	643	0.0519	ppbv # 57
44) 1,1,2-Trichloroethane	0.000	97	0	N.D.	
45) Tetrachloroethylene	0.000	166	0	N.D.	
46) Dibromochloromethane	0.000	129	0	N.D.	
47) 1,2-Dibromoethane	0.000	107	0	N.D.	



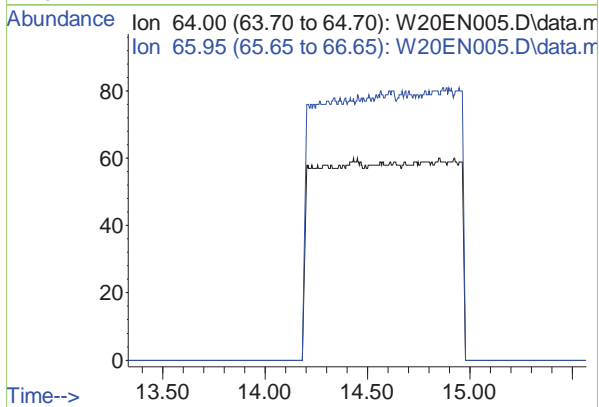
#10
Ethylene oxide
 Concen: N.D.
 Expected RT: 13.89 min
 Lab File: W20EN005.D
 Acq: 14 May 2020 04:25 pm
 Tgt Ion: 29

Sig	Exp Ratio
29	100
15	15.1
14	3.8



#11
 Chloroethane
 Concen: N.D.
 Expected RT: 14.45 min
 Lab File: W20EN005.D
 Acq: 14 May 2020 04:25 pm
 Tgt Ion: 64

Sig	Exp Ratio
64	100
66	32.6



Data Path : C:\gcms\1\data\MS6\W20ER\
 Data File : W20ER002.D
 Acq On : 18 May 2020 12:52 pm
 Operator : KSS
 Sample : 2005035-CCV1
 Misc : 0E13009
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 18 13:33:09 2020
 Quant Method : D:\MassHunter\GCMS\1\methods\0050004.M
 Quant Title : TO-15 by Selective Ion Analysis
 QLast Update : Thu May 14 10:04:26 2020
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.30min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	ISS IS-Hexane-d14	1.000	1.000	0.0	100	0.00
2	CT Acetylene	0.200	0.206	-3.0	100	0.00
3	CT Propylene/Propane	0.290	0.321	-10.7	100	0.00
4	CT Dichlorodifluoromethane	1.078	1.091	-1.2	100	0.00
5	CT Chloromethane	0.438	0.474	-8.2	100	0.00
6	CT Dichlorotetrafluoroethane	1.289	1.454	-12.8	100	0.00
7	CT Vinyl Chloride	0.462	0.494	-6.9	100	0.00
8	CT 1,3-Butadiene	0.333	0.323	3.0	100	0.00
9	CT Bromomethane	0.552	0.577	-4.5	100	0.00
10	CT Ethylene oxide	0.087	0.109	-25.3	100	0.00
11	CT Chloroethane	0.188	0.212	-12.8	100	0.00
12	CT Trichlorofluoromethane	0.965	0.934	3.2	100	0.00
13	CT Acrolein	0.161	0.121	24.8	100	0.00
14	CT 1,1-Dichloroethene	0.480	0.504	-5.0	100	0.00
15	CT Trichlorotrifluoroethane	0.911	0.937	-2.9	100	0.00
16	CT Carbon Disulfide	1.242	1.188	4.3	100	0.00
17	CT Acetonitrile	0.234	0.198	15.4	100	0.00
18	CT Methylene Chloride	0.271	0.296	-9.2	100	0.00
19	CT Acrylonitrile	0.398	0.375	5.8	100	0.00
20	CT trans-1,2-Dichloroethylene	0.618	0.627	-1.5	100	0.00
21	CT Methyl tert-Butyl Ether	1.266	1.226	3.2	100	0.00
22	CT 1,1-Dichloroethane	0.858	0.946	-10.3	100	0.00
23	CT Chloroprene	0.578	0.595	-2.9	100	0.00
24	CT Ethyl tert-Butyl Ether	1.429	1.401	2.0	100	0.00
25	CT cis-1,2-Dichloroethylene	0.624	0.661	-5.9	100	0.00
26	CT Bromochloromethane	0.502	0.511	-1.8	100	0.00
27	CT Chloroform	1.012	1.122	-10.9	100	0.00
28	CT 1,1,1-Trichloroethane	0.978	1.035	-5.8	100	0.00
29	CT Carbon Tetrachloride	0.888	1.059	-19.3	100	0.00
30	CT Benzene	1.830	2.001	-9.3	100	0.00
31	CT 1,2-Dichloroethane	0.388	0.420	-8.2	100	0.00
32	CT tert-Amyl Methyl Ether	1.449	1.344	7.2	100	0.00
33	ISS IS-1,4-Difluorobenzene	1.000	1.000	0.0	100	0.00
34	CT Trichloroethylene	0.342	0.277	19.0	100	0.00
35	CT Ethyl Acrylate	0.349	0.297	14.9	100	0.00
36	CT 1,2-Dichloropropane	0.270	0.268	0.7	100	0.00
37	CT Methyl Methacrylate	0.287	0.253	11.8	100	0.00
38	CT Bromodichloromethane	0.387	0.339	12.4	100	0.00
39	CT cis-1,3-Dichloropropene	0.196	0.180	8.2	100	0.00
40	CT Methyl Isobutyl Ketone	0.423	0.388	8.3	100	0.00
41	CT Toluene	0.909	0.925	-1.8	100	0.00
42	CT n-Octane	0.455	0.440	3.3	100	0.00
43	CT trans-1,3-Dichloropropene	0.133	0.105	21.1	100	0.00
44	CT 1,1,2-Trichloroethane	0.259	0.253	2.3	100	0.00
45	CT Tetrachloroethylene	0.535	0.495	7.5	100	0.00
46	CT Dibromochloromethane	0.459	0.443	3.5	100	0.00
47	CT 1,2-Dibromoethane	0.222	0.177	20.3	100	0.00

Analytical Standard Record

Eastern Research Group

OE13009

Description:	2.50 ppbv ICV	Expires:	06/11/20
Standard Type:	Calibration Stan	Prepared:	05/12/20
Solvent:	Scientific Air	Prepared By:	Kelly Barnes
Final Volume (mls):	6000	Department:	Air Toxics
Vials:	1	Last Edit:	05/13/20 08:57 by KEB

canister# 3227

Analyte	CAS Number	Concentration	Units
Acrolein	107-02-8	0.00248	ppmv
1,1,1-Trichloroethane	71-55-6	0.00253	ppmv
cis-1,2-Dichloroethylene	156-59-2	0.002485	ppmv
Chloroprene	126-99-8	0.00252	ppmv
Chloromethane	74-87-3	0.00253	ppmv
Chloroform	67-66-3	0.00251	ppmv
Chloroethane	75-00-3	0.00249	ppmv
Chlorobenzene	108-90-7	0.0025	ppmv
Carbon Tetrachloride	56-23-5	0.0025	ppmv
Carbon Disulfide	75-15-0	0.002495	ppmv
Bromomethane	74-83-9	0.002505	ppmv
Bromoform	75-25-2	0.002525	ppmv
Bromodichloromethane	75-27-4	0.00254	ppmv
Bromochloromethane	74-97-5	0.002525	ppmv
Dibromochloromethane	124-48-1	0.00259	ppmv
1,2-Dichloroethane	107-06-2	0.002525	ppmv
1,1,2,2-Tetrachloroethane	79-34-5	0.002545	ppmv
1,1,2-Trichloroethane	79-00-5	0.00253	ppmv
1,1-Dichloroethane	75-34-3	0.00248	ppmv
1,1-Dichloroethene	75-35-4	0.0025	ppmv
1,2,4-Trichlorobenzene	120-82-1	0.00249	ppmv
Benzene	71-43-2	0.002535	ppmv
1,2-Dibromoethane	106-93-4	0.002555	ppmv
Acrylonitrile	107-13-1	0.002495	ppmv
1,2-Dichloropropane	78-87-5	0.002535	ppmv
1,3,5-Trimethylbenzene	108-67-8	0.002515	ppmv
1,3-Butadiene	106-99-0	0.00252	ppmv
Acetonitrile	75-05-8	0.002615	ppmv
Acetylene	74-86-2	0.00246	ppmv
Dichlorodifluoromethane	75-71-8	0.002505	ppmv

Reviewed By

Date

Analytical Standard Record

Eastern Research Group

OE13009

1,2,4-Trimethylbenzene	95-63-6	0.00238	ppmv
Naphthalene	91-20-3	0.00248	ppmv
Trichlorotrifluoroethane	76-13-1	0.002515	ppmv
Trichlorofluoromethane	75-69-4	0.0025	ppmv
Trichloroethylene	79-01-6	0.002575	ppmv
trans-1,3-Dichloropropene	10061-02-6	0.002465	ppmv
trans-1,2-Dichloroethylene	156-60-5	0.002545	ppmv
Toluene	108-88-3	0.002485	ppmv
Tetrachloroethylene	127-18-4	0.002515	ppmv
tert-Amyl Methyl Ether	994-05-8	0.00264	ppmv
Styrene	100-42-5	0.00246	ppmv
Propylene	115-07-1	0.00246	ppmv
p-Dichlorobenzene	106-46-7	0.00264	ppmv
o-Xylene	95-47-6	0.002495	ppmv
o-Dichlorobenzene	95-50-1	0.002515	ppmv
cis-1,3-Dichloropropene	10061-01-5	0.00259	ppmv
m,p-Xylene	108-38-3, 106-42-3	0.005	ppmv
Dichloromethane	75-09-2	0.00246	ppmv
Dichlorotetrafluoroethane	76-14-2	0.002525	ppmv
Ethyl Acrylate	140-88-5	0.002585	ppmv
Ethyl tert-Butyl Ether	637-92-3	0.00262	ppmv
Ethylbenzene	100-41-4	0.00255	ppmv
n-Octane	111-65-9	0.00257	ppmv
Hexachloro-1,3-butadiene	87-68-3	0.00255	ppmv
n-Hexane	110-54-3	0.002525	ppmv
m-Dichlorobenzene	541-73-1	0.00242	ppmv
Methyl Ethyl Ketone	78-93-3	0.0026255	ppmv
Methyl Isobutyl Ketone	108-10-1	0.002575	ppmv
Methyl Methacrylate	80-62-6	0.002585	ppmv
Methyl tert-Butyl Ether	1634-04-4	0.00259	ppmv
Vinyl chloride	75-01-4	0.002495	ppmv
Ethylene oxide	75-21-8	0.0025	ppmv

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
9G18011	Ethylene Oxide Secondary Stock	S07/16/19	Mitch Howell	07/16/20	07/18/19 17:21 by MH	15
9J10002	TO-15 Secondary Stock Standard	10/10/19	Mitch Howell	10/03/20	10/17/19 13:31 by KSS	30

Reviewed By

Date

Data Path : C:\gcms\1\data\MS6\W20ER\
 Data File : W20ER002.D
 Acq On : 18 May 2020 12:52 pm
 Operator : KSS
 Sample : 2005035-CCV1
 Misc : 0E13009
 ALS Vial : 2 Sample Multiplier: 1

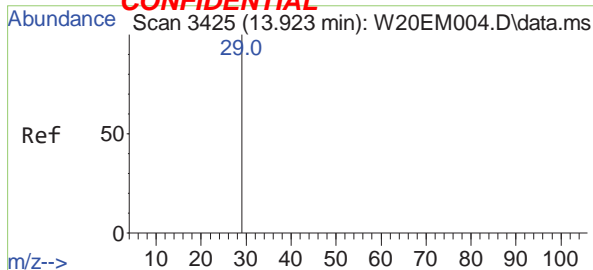
Quant Time: May 18 13:33:09 2020
 Quant Method : D:\MassHunter\GCMS\1\methods\0050004.M
 Quant Title : TO-15 by Selective Ion Analysis
 QLast Update : Thu May 14 10:04:26 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) IS-Hexane-d14	18.370	66	169745	5.1840	ppbv	-0.01
33) IS-1,4-Difluorobenzene	21.395	114	481363	5.3120	ppbv	-0.01
48) IS-Chlorobenzene-d5	25.353	117	307181	5.0560	ppbv	0.00

System Monitoring Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Acetylene	4.264	26	16585	2.5289	ppbv	100
3) Propylene/Propane	7.179	41	25820	2.7182	ppbv	99
4) Dichlorodifluoromethane	8.265	85	89449	2.5349	ppbv #	98
5) Chloromethane	10.757	50	39300	2.7426	ppbv	99
6) Dichlorotetrafluoroethane	10.815	85	120189	2.8480	ppbv	99
7) Vinyl Chloride	11.991	62	40383	2.6701	ppbv	100
8) 1,3-Butadiene	12.377	54	26628	2.4429	ppbv	97
9) Bromomethane	13.829	94	47317	2.6167	ppbv	93
10) Ethylene oxide	13.868	29	8916m	3.1316	ppbv	
11) Chloroethane	14.426	64	17276	2.8050	ppbv	99
12) Trichlorofluoromethane	15.325	101	76451	2.4190	ppbv	100
13) Acrolein	16.505	56	9853	1.8707	ppbv	98
14) 1,1-Dichloroethene	16.639	61	41294	2.6290	ppbv	94
15) Trichlorotrifluoroethane	16.765	101	77191	2.5878	ppbv	94
16) Carbon Disulfide	16.946	76	97089	2.3870	ppbv	100
17) Acetonitrile	17.396	41	16986	2.2147	ppbv	97
18) Methylene Chloride	17.701	49	23808	2.6864	ppbv	94
19) Acrylonitrile	18.121	53	30600	2.3501	ppbv	98
20) trans-1,2-Dichloroethy...	18.157	96	52287	2.5852	ppbv	91
21) Methyl tert-Butyl Ether	18.168	73	103931	2.5064	ppbv	98
22) 1,1-Dichloroethane	18.861	63	76818	2.7336	ppbv	100
23) Chloroprene	18.962	53	49096	2.5932	ppbv	99
24) Ethyl tert-Butyl Ether	19.457	59	120150	2.5673	ppbv	96
25) cis-1,2-Dichloroethylene	19.695	61	53805	2.6318	ppbv	96
26) Bromochloromethane	20.024	128	42208	2.5657	ppbv	99
27) Chloroform	20.161	83	92205	2.7816	ppbv	100
28) 1,1,1-Trichloroethane	20.385	97	85729	2.6768	ppbv	99
29) Carbon Tetrachloride	20.594	117	86726	2.9825	ppbv	99
30) Benzene	20.861	78	166061	2.7714	ppbv	100
31) 1,2-Dichloroethane	20.926	62	34749	2.7382	ppbv	99
32) tert-Amyl Methyl Ether	21.027	73	116174	2.4483	ppbv	99
34) Trichloroethylene	21.724	130	64743	2.0873	ppbv	94
35) Ethyl Acrylate	21.779	55	69534	2.1957	ppbv	99
36) 1,2-Dichloropropane	22.071	63	61603	2.5218	ppbv	89
37) Methyl Methacrylate	22.082	41	59328	2.2826	ppbv	96
38) Bromodichloromethane	22.401	83	78003	2.2242	ppbv	99
39) cis-1,3-Dichloropropene	22.967	75	42269	2.3747	ppbv	100
40) Methyl Isobutyl Ketone	23.139	43	90509	2.3592	ppbv	98
41) Toluene	23.432	91	208265	2.5270	ppbv	99
42) n-Octane	23.534	43	102400	2.4812	ppbv	97
43) trans-1,3-Dichloropropene	23.706	75	23500	1.9541	ppbv	98
44) 1,1,2-Trichloroethane	23.992	97	57985	2.4685	ppbv	99
45) Tetrachloroethylene	24.138	166	112747	2.3243	ppbv	99
46) Dibromochloromethane	24.532	129	100419	2.4123	ppbv	100
47) 1,2-Dibromoethane	24.725	107	41054	2.0421	ppbv	100

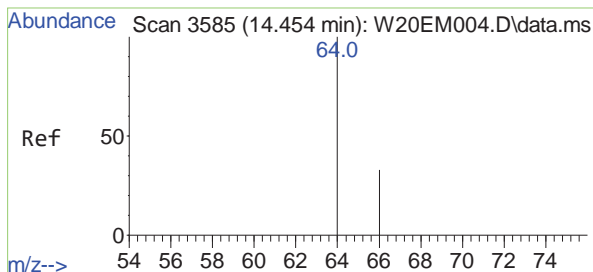
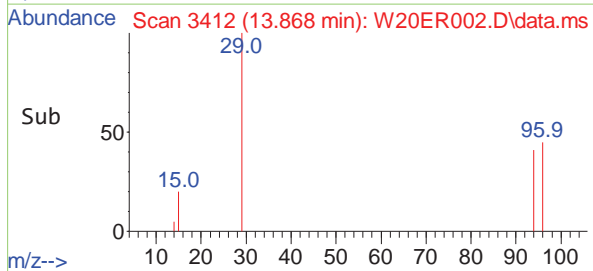
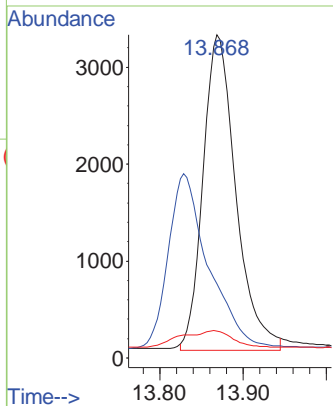
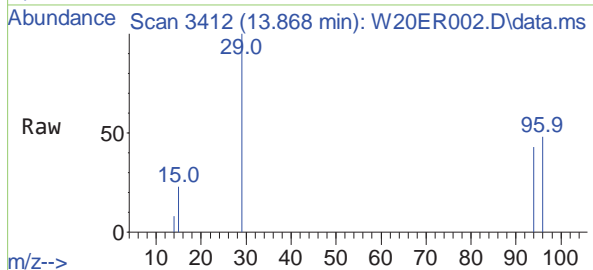
CONFIDENTIAL



#10
Ethylene oxide
 Concen: 3.132 ppbv m
 RT: 13.868 min Scan# 3412
 Delta R.T. -0.025 min
 Lab File: W20ER002.D
 Acq: 18 May 2020 12:52 pm

Tgt Ion: 29 Resp: 8916

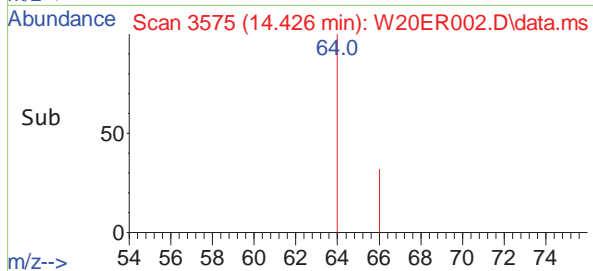
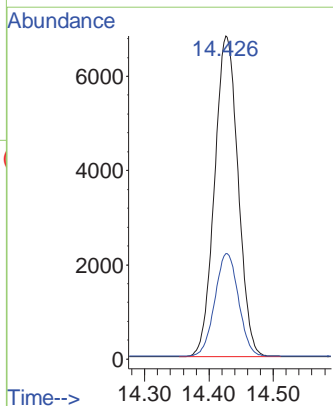
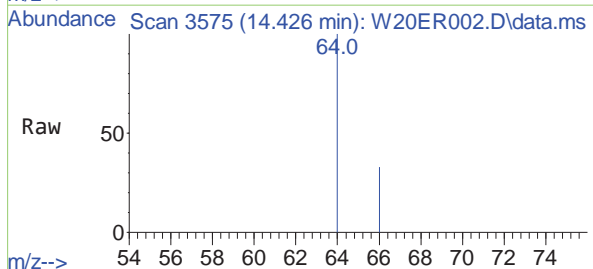
Ion	Ratio	Lower	Upper
29	100		
15	10.9	10.6	19.6
14	3.8	2.7	4.9



#11
 Chloroethane
 Concen: 2.805 ppbv
 RT: 14.426 min Scan# 3575
 Delta R.T. -0.025 min
 Lab File: W20ER002.D
 Acq: 18 May 2020 12:52 pm

Tgt Ion: 64 Resp: 17276

Ion	Ratio	Lower	Upper
64	100		
66	32.2	22.8	42.4



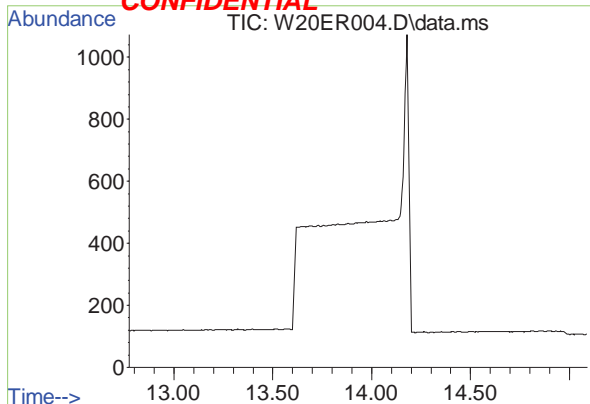
Data Path : C:\gcms\1\data\MS6\W20ER\
 Data File : W20ER004.D
 Acq On : 18 May 2020 02:54 pm
 Operator : KSS
 Sample : B0E1703-BLK1
 Misc : T-H1-841
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 19 09:39:47 2020
 Quant Method : D:\MassHunter\GCMS\1\methods\0050004.M
 Quant Title : T0-15 by Selective Ion Analysis
 QLast Update : Thu May 14 10:04:26 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) IS-Hexane-d14	18.372	66	161346	5.1840	ppbv	-0.01
33) IS-1,4-Difluorobenzene	21.396	114	423551	5.3120	ppbv	0.00
48) IS-Chlorobenzene-d5	25.351	117	220190	5.0560	ppbv	0.00

System Monitoring Compounds

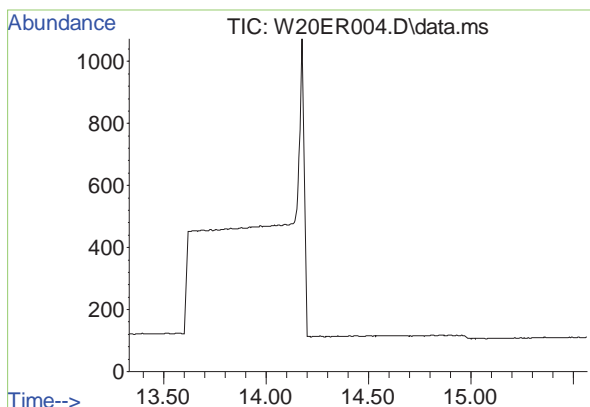
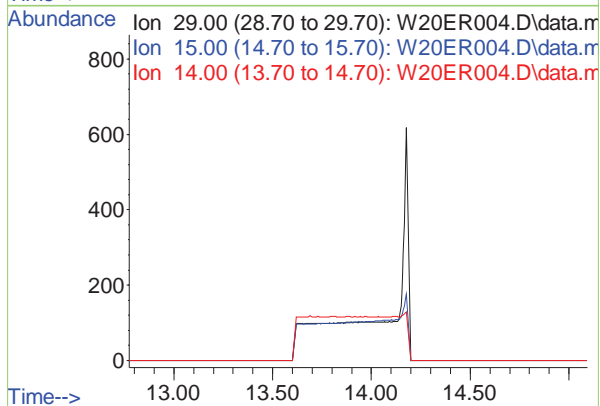
Target Compounds					Qvalue
2) Acetylene	0.000	26	0	N.D.	
3) Propylene/Propane	7.171	41	84	0.0093	ppbv # 15
4) Dichlorodifluoromethane	0.000	85	0	N.D.	
5) Chloromethane	0.000	50	0	N.D.	
6) Dichlorotetrafluoroethane	0.000	85	0	N.D.	
7) Vinyl Chloride	0.000	62	0	N.D.	
8) 1,3-Butadiene	0.000	54	0	N.D.	
9) Bromomethane	0.000	94	0	N.D.	
10) Ethylene oxide	0.000	29	0	N.D.	
11) Chloroethane	0.000	64	0	N.D.	
12) Trichlorofluoromethane	0.000	101	0	N.D.	
13) Acrolein	16.542	56	92	0.0184	ppbv 94
14) 1,1-Dichloroethene	0.000	61	0	N.D.	
15) Trichlorotrifluoroethane	16.760	101	53	0.0019	ppbv # 66
16) Carbon Disulfide	16.946	76	164	0.0042	ppbv 100
17) Acetonitrile	0.000	41	0	N.D.	
18) Methylene Chloride	0.000	49	0	N.D.	
19) Acrylonitrile	0.000	53	0	N.D.	
20) trans-1,2-Dichloroethy...	0.000	96	0	N.D.	
21) Methyl tert-Butyl Ether	0.000	73	0	N.D.	
22) 1,1-Dichloroethane	0.000	63	0	N.D.	
23) Chloroprene	0.000	53	0	N.D.	
24) Ethyl tert-Butyl Ether	0.000	59	0	N.D.	
25) cis-1,2-Dichloroethylene	0.000	61	0	N.D.	
26) Bromochloromethane	0.000	128	0	N.D.	
27) Chloroform	0.000	83	0	N.D.	
28) 1,1,1-Trichloroethane	0.000	97	0	N.D.	
29) Carbon Tetrachloride	0.000	117	0	N.D.	
30) Benzene	20.863	78	360	0.0063	ppbv 99
31) 1,2-Dichloroethane	0.000	62	0	N.D.	
32) tert-Amyl Methyl Ether	0.000	73	0	N.D.	
34) Trichloroethylene	21.726	130	125	0.0046	ppbv # 14
35) Ethyl Acrylate	0.000	55	0	N.D.	
36) 1,2-Dichloropropane	0.000	63	0	N.D.	
37) Methyl Methacrylate	22.094	41	94	0.0041	ppbv 94
38) Bromodichloromethane	0.000	83	0	N.D.	
39) cis-1,3-Dichloropropene	0.000	75	0	N.D.	
40) Methyl Isobutyl Ketone	23.147	43	27	0.0008	ppbv # 40
41) Toluene	23.433	91	115	0.0016	ppbv 100
42) n-Octane	23.529	43	41	0.0011	ppbv # 81
43) trans-1,3-Dichloropropene	0.000	75	0	N.D.	
44) 1,1,2-Trichloroethane	0.000	97	0	N.D.	
45) Tetrachloroethylene	0.000	166	0	N.D.	
46) Dibromochloromethane	0.000	129	0	N.D.	
47) 1,2-Dibromoethane	0.000	107	0	N.D.	



#10
Ethylene oxide
 Concen: N.D.
 Expected RT: 13.89 min

 Lab File: W20ER004.D
 Acq: 18 May 2020 02:54 pm

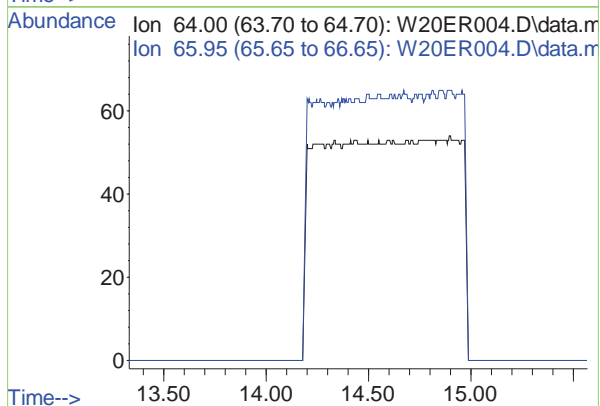
 Tgt Ion: 29
 Sig Exp Ratio
 29 100
 15 15.1
 14 3.8



#11
 Chloroethane
 Concen: N.D.
 Expected RT: 14.45 min

 Lab File: W20ER004.D
 Acq: 18 May 2020 02:54 pm

 Tgt Ion: 64
 Sig Exp Ratio
 64 100
 66 32.6



Method Path : D:\MassHunter\GCMS\1\methods\
 Method File : 0050007.M
 Title : T0-15 by Selective Ion Analysis
 Last Update : Thu May 21 09:42:48 2020
 Response Via : Initial Calibration

Calibration Files

1 =W20ET004.D 2 =W20ET005.D 3 =W20ET006.D 4 =W20ET007.D 5 =W20ET008.D 6 =W20E
 T009.D

Compound	1	2	3	4	5	6	Avg	%RSD

1) ISS IS-Hexane-d14	-----ISTD-----							
2) CT Acetylene	0.235	0.282	0.254	0.237	0.222	0.232	0.244	8.75
3) CT Propylene/Propane	0.333	0.380	0.342	0.317	0.296	0.310	0.330	8.90
4) CT Dichlorodifluo...	1.273	1.503	1.364	1.257	1.156	1.188	1.290	9.84
5) CT Chloromethane	0.552	0.641	0.564	0.519	0.477	0.490	0.541	11.02
6) CT Dichlorotetra...	1.525	1.789	1.623	1.498	1.377	1.419	1.538	9.73
7) CT Vinyl Chloride	0.539	0.639	0.576	0.522	0.468	0.472	0.536	12.14
8) CT 1,3-Butadiene	0.357	0.430	0.395	0.358	0.300	0.269	0.352	16.84
9) CT Bromomethane	0.623	0.744	0.675	0.620	0.547	0.511	0.620	13.62
10) CT Ethylene oxide	0.121	0.112	0.109	0.123	0.119	0.111	0.116	5.09
11) CT Chloroethane	0.225	0.267	0.243	0.227	0.207	0.176	0.224	13.76
12) CT Trichlorofluor...	1.129	1.319	1.194	1.093	0.966	0.916	1.103	13.42
13) CT Acrolein	0.183	0.197	0.176	0.165	0.151	0.158	0.172	9.90
14) CT 1,1-Dichloroet...	0.510	0.601	0.548	0.510	0.474	0.447	0.515	10.57
15) CT Trichlorotrifl...	0.992	1.153	1.045	0.970	0.893	0.914	0.994	9.55
16) CT Carbon Disulfide	1.244	1.474	1.347	1.260	1.174	1.107	1.268	10.23
17) CT Acetonitrile	0.289	0.344	0.313	0.269	0.241	0.256	0.285	13.33
18) CT Methylene Chlo...	0.297	0.352	0.324	0.299	0.279	0.290	0.307	8.68
19) CT Acrylonitrile	0.229	0.338	0.413	0.246	0.227	0.234	0.281	27.40
20) CT trans-1,2-Dich...	0.376	0.719	0.708	0.397	0.415	0.376	0.499	33.57#
21) CT Methyl tert-Bu...	1.282	1.501	1.365	0.823	0.883	0.702	1.093	30.25#
22) CT 1,1-Dichloroet...	0.968	1.130	1.037	0.973	0.906	0.932	0.991	8.20
23) CT Chloroprene	0.532	0.623	0.581	0.571	0.556	0.605	0.578	5.72
24) CT Ethyl tert-But...	1.335	1.577	1.472	1.402	1.333	1.426	1.424	6.46
25) CT cis-1,2-Dichlo...	0.646	0.768	0.710	0.681	0.648	0.689	0.690	6.53
26) CT Bromochloromet...	0.553	0.649	0.596	0.560	0.525	0.553	0.572	7.66
27) CT Chloroform	1.097	1.281	1.178	1.115	1.043	1.089	1.134	7.44
28) CT 1,1,1-Trichlor...	1.069	1.239	1.128	1.054	0.975	1.010	1.079	8.72
29) CT Carbon Tetrach...	0.883	1.054	0.962	0.899	0.834	0.874	0.918	8.58
30) CT Benzene	1.894	2.202	2.025	1.924	1.807	1.877	1.955	7.18
31) CT 1,2-Dichloroet...	0.398	0.472	0.441	0.431	0.420	0.462	0.437	6.26
32) CT tert-Amyl Meth...	1.282	1.520	1.431	1.375	1.326	1.462	1.399	6.34

33) ISS IS-1,4-Difluoroben...	-----ISTD-----							
34) CT Trichloroethylene	0.293	0.338	0.313	0.309	0.296	0.336	0.314	6.17
35) CT Ethyl Acrylate	0.295	0.352	0.333	0.318	0.323	0.367	0.331	7.75
36) CT 1,2-Dichloropr...	0.294	0.342	0.307	0.284	0.259	0.265	0.292	10.41
37) CT Methyl Methacr...	0.287	0.318	0.286	0.269	0.256	0.269	0.281	7.68
38) CT Bromodichlorom...	0.391	0.461	0.416	0.395	0.372	0.393	0.405	7.65
39) CT cis-1,3-Dichlo...	0.156	0.184	0.170	0.171	0.186	0.228	0.182	13.63
40) CT Methyl Isobuty...	0.421	0.492	0.469	0.411	0.383	0.400	0.429	9.77
41) CT Toluene	0.793	0.960	0.906	0.869	0.834	0.851	0.869	6.70
42) CT n-Octane	0.355	0.445	0.431	0.439	0.423	0.443	0.422	8.06
43) CT trans-1,3-Dich...	0.113	0.128	0.112	0.110	0.119	0.154	0.123	13.73
44) CT 1,1,2-Trichlor...	0.250	0.296	0.272	0.266	0.259	0.277	0.270	5.95
45) CT Tetrachloroeth...	0.466	0.550	0.507	0.481	0.457	0.471	0.489	7.06
46) CT Dibromochlorom...	0.433	0.520	0.480	0.474	0.471	0.511	0.482	6.50
47) CT 1,2-Dibromoethane	0.170	0.201	0.183	0.188	0.209	0.268	0.203	17.15

48) ISS IS-Chlorobenzene-d5	-----ISTD-----							
49) CT Chlorobenzene	0.801	0.913	0.829	0.784	0.741	0.776	0.807	7.34
50) CT Ethylbenzene	1.344	1.559	1.421	1.344	1.244	1.248	1.360	8.70
51) CT m,p-Xylene	1.115	1.320	1.220	1.159	1.053	1.030	1.149	9.44

PT
6/11/20

Data Path : C:\gcms\1\data\MS6\W20EU\
 Data File : W20EU003.D
 Acq On : 21 May 2020 05:21 pm
 Operator : KSS
 Sample : 2005050-CCV1
 Misc : 0E20017
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 21 18:02:31 2020
 Quant Method : D:\MassHunter\GCMS\1\methods\0050007.M
 Quant Title : TO-15 by Selective Ion Analysis
 QLast Update : Thu May 21 09:42:48 2020
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.30min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	ISS IS-Hexane-d14	1.000	1.000	0.0	100	0.00
2	CT Acetylene	0.244	0.224	8.2	100	0.00
3	CT Propylene/Propane	0.330	0.332	-0.6	100	0.00
4	CT Dichlorodifluoromethane	1.290	1.146	11.2	100	0.00
5	CT Chloromethane	0.541	0.508	6.1	100	0.00
6	CT Dichlorotetrafluoroethane	1.538	1.545	-0.5	100	0.00
7	CT Vinyl Chloride	0.536	0.514	4.1	100	0.00
8	CT 1,3-Butadiene	0.352	0.324	8.0	100	0.00
9	CT Bromomethane	0.620	0.605	2.4	100	0.00
10	CT Ethylene oxide	0.116	0.123	-6.0	100	0.00
11	CT Chloroethane	0.224	0.226	-0.9	100	0.00
12	CT Trichlorofluoromethane	1.103	0.959	13.1	100	0.00
13	CT Acrolein	0.172	0.138	19.8	100	0.00
14	CT 1,1-Dichloroethene	0.515	0.523	-1.6	100	0.00
15	CT Trichlorotrifluoroethane	0.994	0.975	1.9	100	0.00
16	CT Carbon Disulfide	1.268	1.234	2.7	100	0.00
17	CT Acetonitrile	0.285	0.211	26.0	100	0.00
18	CT Methylene Chloride	0.307	0.306	0.3	100	0.00
19	CT Acrylonitrile	0.281	0.203	27.8	100	0.00
20	CT trans-1,2-Dichloroethylene	0.499	0.431	13.6	100	0.00
21	CT Methyl tert-Butyl Ether	1.093	0.959	12.3	100	0.00
22	CT 1,1-Dichloroethane	0.991	0.961	3.0	100	0.00
23	CT Chloroprene	0.578	0.571	1.2	100	0.00
24	CT Ethyl tert-Butyl Ether	1.424	1.384	2.8	100	0.00
25	CT cis-1,2-Dichloroethylene	0.690	0.665	3.6	100	0.00
26	CT Bromochloromethane	0.572	0.514	10.1	100	0.00
27	CT Chloroform	1.134	1.129	0.4	100	0.00
28	CT 1,1,1-Trichloroethane	1.079	1.024	5.1	100	0.00
29	CT Carbon Tetrachloride	0.918	1.040	-13.3	100	0.00
30	CT Benzene	1.955	1.985	-1.5	100	0.00
31	CT 1,2-Dichloroethane	0.437	0.427	2.3	100	0.00
32	CT tert-Amyl Methyl Ether	1.399	1.316	5.9	100	0.00
33	ISS IS-1,4-Difluorobenzene	1.000	1.000	0.0	100	0.00
34	CT Trichloroethylene	0.314	0.279	11.1	100	0.00
35	CT Ethyl Acrylate	0.331	0.291	12.1	100	0.00
36	CT 1,2-Dichloropropane	0.292	0.271	7.2	100	0.00
37	CT Methyl Methacrylate	0.281	0.251	10.7	100	0.00
38	CT Bromodichloromethane	0.405	0.340	16.0	100	0.00
39	CT cis-1,3-Dichloropropene	0.182	0.176	3.3	100	0.00
40	CT Methyl Isobutyl Ketone	0.429	0.382	11.0	100	0.00
41	CT Toluene	0.869	0.893	-2.8	100	0.00
42	CT n-Octane	0.422	0.426	-0.9	100	0.00
43	CT trans-1,3-Dichloropropene	0.123	0.108	12.2	100	0.00
44	CT 1,1,2-Trichloroethane	0.270	0.255	5.6	100	0.00
45	CT Tetrachloroethylene	0.489	0.471	3.7	100	0.00
46	CT Dibromochloromethane	0.482	0.445	7.7	100	0.00
47	CT 1,2-Dibromoethane	0.203	0.181	10.8	100	0.00

Analytical Standard Record

Eastern Research Group

OE20017

Description:	2.50 ppbv ICV	Expires:	06/19/20
Standard Type:	Calibration Stan	Prepared:	05/20/20
Solvent:	Scientific Air	Prepared By:	Kameron Singer
Final Volume (mls):	6000	Department:	Air Toxics
Vials:	1	Last Edit:	05/20/20 14:08 by KSS

canister# 3234

Analyte	CAS Number	Concentration	Units
Acrolein	107-02-8	0.00248	ppmv
1,1,1-Trichloroethane	71-55-6	0.00253	ppmv
cis-1,2-Dichloroethylene	156-59-2	0.002485	ppmv
Chloroprene	126-99-8	0.00252	ppmv
Chloromethane	74-87-3	0.00253	ppmv
Chloroform	67-66-3	0.00251	ppmv
Chloroethane	75-00-3	0.00249	ppmv
Chlorobenzene	108-90-7	0.0025	ppmv
Carbon Tetrachloride	56-23-5	0.0025	ppmv
Carbon Disulfide	75-15-0	0.002495	ppmv
Bromomethane	74-83-9	0.002505	ppmv
Bromoform	75-25-2	0.002525	ppmv
Bromodichloromethane	75-27-4	0.00254	ppmv
Bromochloromethane	74-97-5	0.002525	ppmv
Dibromochloromethane	124-48-1	0.00259	ppmv
1,2-Dichloroethane	107-06-2	0.002525	ppmv
1,1,2,2-Tetrachloroethane	79-34-5	0.002545	ppmv
1,1,2-Trichloroethane	79-00-5	0.00253	ppmv
1,1-Dichloroethane	75-34-3	0.00248	ppmv
1,1-Dichloroethene	75-35-4	0.0025	ppmv
1,2,4-Trichlorobenzene	120-82-1	0.00249	ppmv
Benzene	71-43-2	0.002535	ppmv
1,2-Dibromoethane	106-93-4	0.002555	ppmv
Acrylonitrile	107-13-1	0.002495	ppmv
1,2-Dichloropropane	78-87-5	0.002535	ppmv
1,3,5-Trimethylbenzene	108-67-8	0.002515	ppmv
1,3-Butadiene	106-99-0	0.00252	ppmv
Acetonitrile	75-05-8	0.002615	ppmv
Acetylene	74-86-2	0.00246	ppmv
Dichlorodifluoromethane	75-71-8	0.002505	ppmv

Reviewed By

Date

Analytical Standard Record

Eastern Research Group

OE20017

1,2,4-Trimethylbenzene	95-63-6	0.00238	ppmv
Naphthalene	91-20-3	0.00248	ppmv
Trichlorotrifluoroethane	76-13-1	0.002515	ppmv
Trichlorofluoromethane	75-69-4	0.0025	ppmv
Trichloroethylene	79-01-6	0.002575	ppmv
trans-1,3-Dichloropropene	10061-02-6	0.002465	ppmv
trans-1,2-Dichloroethylene	156-60-5	0.002545	ppmv
Toluene	108-88-3	0.002485	ppmv
Tetrachloroethylene	127-18-4	0.002515	ppmv
tert-Amyl Methyl Ether	994-05-8	0.00264	ppmv
Styrene	100-42-5	0.00246	ppmv
Propylene	115-07-1	0.00246	ppmv
p-Dichlorobenzene	106-46-7	0.00264	ppmv
o-Xylene	95-47-6	0.002495	ppmv
o-Dichlorobenzene	95-50-1	0.002515	ppmv
cis-1,3-Dichloropropene	10061-01-5	0.00259	ppmv
m,p-Xylene	108-38-3, 106-42-3	0.005	ppmv
Dichloromethane	75-09-2	0.00246	ppmv
Dichlorotetrafluoroethane	76-14-2	0.002525	ppmv
Ethyl Acrylate	140-88-5	0.002585	ppmv
Ethyl tert-Butyl Ether	637-92-3	0.00262	ppmv
Ethylbenzene	100-41-4	0.00255	ppmv
n-Octane	111-65-9	0.00257	ppmv
Hexachloro-1,3-butadiene	87-68-3	0.00255	ppmv
n-Hexane	110-54-3	0.002525	ppmv
m-Dichlorobenzene	541-73-1	0.00242	ppmv
Methyl Ethyl Ketone	78-93-3	0.0026255	ppmv
Methyl Isobutyl Ketone	108-10-1	0.002575	ppmv
Methyl Methacrylate	80-62-6	0.002585	ppmv
Methyl tert-Butyl Ether	1634-04-4	0.00259	ppmv
Vinyl chloride	75-01-4	0.002495	ppmv
Ethylene oxide	75-21-8	0.0025	ppmv

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
9G18011	Ethylene Oxide Secondary Stock	S07/16/19	Mitch Howell	07/16/20	07/18/19 17:21 by MH	15
9J10002	TO-15 Secondary Stock Standard	10/10/19	Mitch Howell	10/03/20	10/17/19 13:31 by KSS	30

Reviewed By

Date

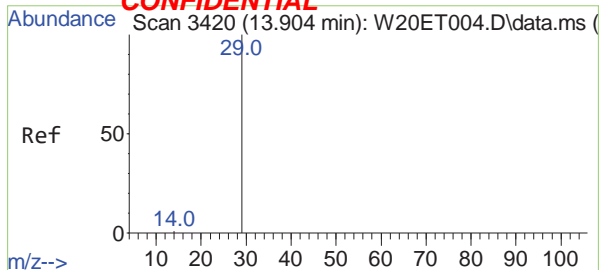
Data Path : C:\gcms\1\data\MS6\W20EU\
 Data File : W20EU003.D
 Acq On : 21 May 2020 05:21 pm
 Operator : KSS
 Sample : 2005050-CCV1
 Misc : 0E20017
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 21 18:02:31 2020
 Quant Method : D:\MassHunter\GCMS\1\methods\0050007.M
 Quant Title : TO-15 by Selective Ion Analysis
 QLast Update : Thu May 21 09:42:48 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) IS-Hexane-d14	18.358	66	161197	5.1840	ppbv	0.00
33) IS-1,4-Difluorobenzene	21.395	114	465972	5.3120	ppbv	0.00
48) IS-Chlorobenzene-d5	25.353	117	296971	5.0560	ppbv	0.00

System Monitoring Compounds

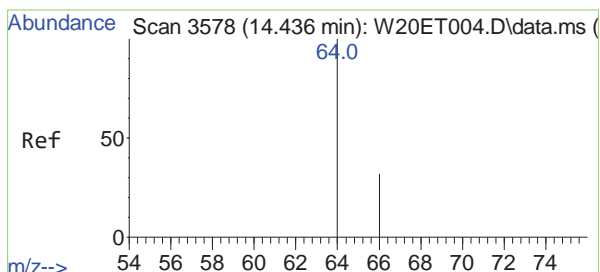
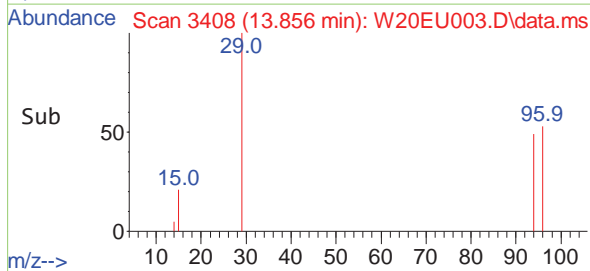
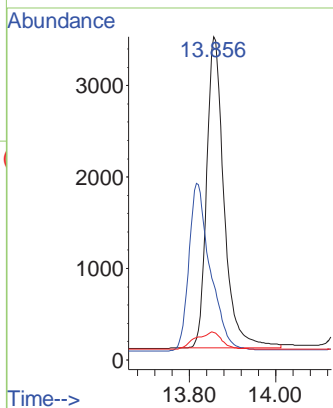
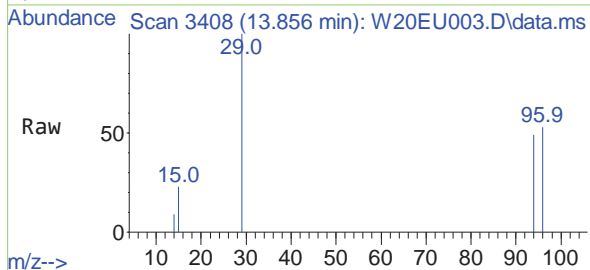
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Acetylene	4.261	26	17140	2.2631	ppbv	100
3) Propylene/Propane	7.173	41	25368	2.4731	ppbv	99
4) Dichlorodifluoromethane	8.259	85	89287	2.2259	ppbv	100
5) Chloromethane	10.751	50	39995	2.3787	ppbv	100
6) Dichlorotetrafluoroethane	10.809	85	121318	2.5360	ppbv	99
7) Vinyl Chloride	11.982	62	39903	2.3942	ppbv	100
8) 1,3-Butadiene	12.368	54	25399	2.3237	ppbv	99
9) Bromomethane	13.820	94	47114	2.4441	ppbv	100
10) Ethylene oxide	13.856	29	9594m	2.6627	ppbv	
11) Chloroethane	14.418	64	17510	2.5140	ppbv	99
12) Trichlorofluoromethane	15.315	101	74522	2.1728	ppbv	100
13) Acrolein	16.497	56	10677	2.0015	ppbv	100
14) 1,1-Dichloroethene	16.632	61	40641	2.5376	ppbv	100
15) Trichlorotrifluoroethane	16.753	101	76249	2.4657	ppbv	100
16) Carbon Disulfide	16.934	76	95771	2.4294	ppbv	100
17) Acetonitrile	17.387	41	17120	1.9289	ppbv	99
18) Methylene Chloride	17.692	49	23394	2.4531	ppbv	100
19) Acrylonitrile	18.110	53	15738	1.8000	ppbv	99
20) trans-1,2-Dichloroethy...	18.151	96	34115	2.2008	ppbv	97
21) Methyl tert-Butyl Ether	18.163	73	77261	2.2738	ppbv	99
22) 1,1-Dichloroethane	18.850	63	74125	2.4059	ppbv	100
23) Chloroprene	18.951	53	44772	2.4913	ppbv	100
24) Ethyl tert-Butyl Ether	19.449	59	112752	2.5460	ppbv	100
25) cis-1,2-Dichloroethylene	19.688	61	51361	2.3923	ppbv	100
26) Bromochloromethane	20.017	128	40379	2.2683	ppbv	100
27) Chloroform	20.154	83	88144	2.4997	ppbv	100
28) 1,1,1-Trichloroethane	20.378	97	80536	2.4006	ppbv	100
29) Carbon Tetrachloride	20.587	117	80809	2.8324	ppbv	100
30) Benzene	20.862	78	156436	2.5738	ppbv	100
31) 1,2-Dichloroethane	20.920	62	33546	2.4672	ppbv	100
32) tert-Amyl Methyl Ether	21.021	73	108018	2.4825	ppbv	100
34) Trichloroethylene	21.719	130	62950	2.2827	ppbv	100
35) Ethyl Acrylate	21.780	55	65935	2.2697	ppbv	99
36) 1,2-Dichloropropane	22.066	63	60247	2.3515	ppbv	97
37) Methyl Methacrylate	22.077	41	57005	2.3162	ppbv	100
38) Bromodichloromethane	22.401	83	75802	2.1360	ppbv	100
39) cis-1,3-Dichloropropene	22.968	75	39992	2.4992	ppbv	100
40) Methyl Isobutyl Ketone	23.133	43	86202	2.2881	ppbv	100
41) Toluene	23.426	91	194563	2.5522	ppbv	100
42) n-Octane	23.528	43	95997	2.5904	ppbv	100
43) trans-1,3-Dichloropropene	23.706	75	23413	2.1724	ppbv	99
44) 1,1,2-Trichloroethane	23.986	97	56605	2.3889	ppbv	100
45) Tetrachloroethylene	24.139	166	104006	2.4261	ppbv	100
46) Dibromochloromethane	24.529	129	97492	2.3072	ppbv	100
47) 1,2-Dibromoethane	24.722	107	40674	2.2824	ppbv	100



#10
Ethylene oxide
 Concen: 2.663 ppbv m
 RT: 13.856 min Scan# 3408
 Delta R.T. -0.017 min
 Lab File: W20EU003.D
 Acq: 21 May 2020 05:21 pm

Tgt Ion: 29 Resp: 9594

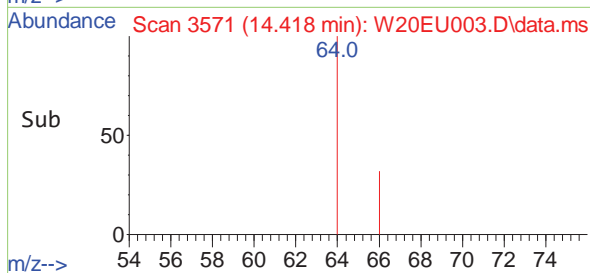
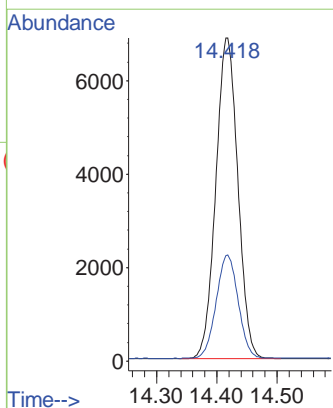
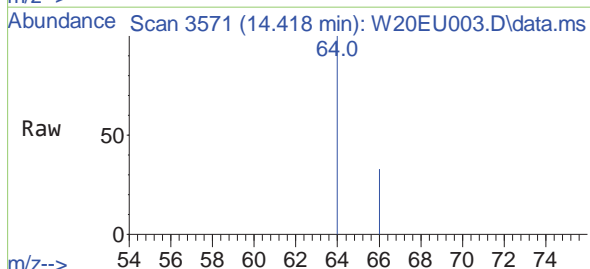
Ion	Ratio	Lower	Upper
29	100		
15	8.3	7.8	14.6
14	5.5	3.6	6.8



#11
 Chloroethane
 Concen: 2.514 ppbv
 RT: 14.418 min Scan# 3571
 Delta R.T. -0.013 min
 Lab File: W20EU003.D
 Acq: 21 May 2020 05:21 pm

Tgt Ion: 64 Resp: 17510

Ion	Ratio	Lower	Upper
64	100		
66	32.1	22.7	42.3



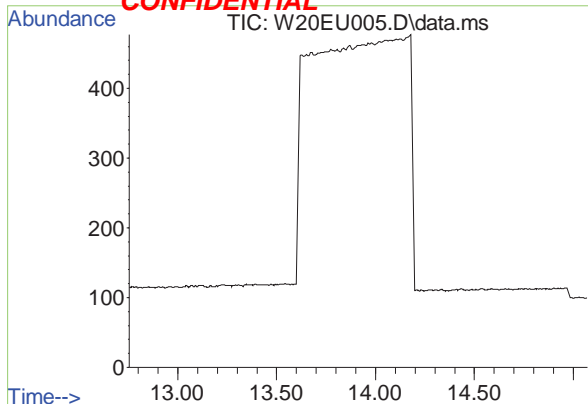
Data Path : C:\gcms\1\data\MS6\W20EU\
 Data File : W20EU005.D
 Acq On : 21 May 2020 07:20 pm
 Operator : KSS
 Sample : B0E2104-BLK1
 Misc : B-H1-848
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 22 10:16:05 2020
 Quant Method : D:\MassHunter\GCMS\1\methods\0050007.M
 Quant Title : T0-15 by Selective Ion Analysis
 QLast Update : Thu May 21 09:42:48 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) IS-Hexane-d14	18.367	66	153840	5.1840	ppbv	0.00
33) IS-1,4-Difluorobenzene	21.401	114	403509	5.3120	ppbv	0.00
48) IS-Chlorobenzene-d5	25.354	117	221388	5.0560	ppbv	0.00

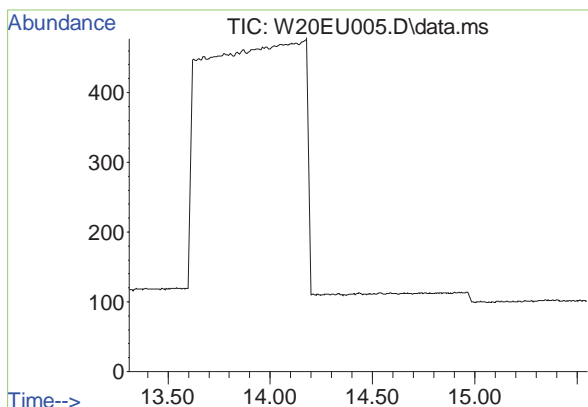
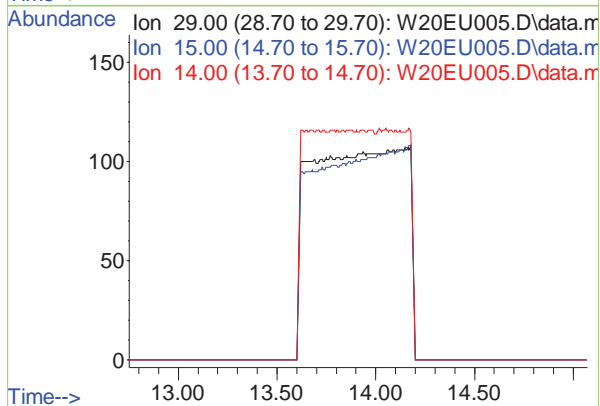
System Monitoring Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Acetylene	0.000	26	0	N.D.		
3) Propylene/Propane	7.182	41	200m	0.0204	ppbv	
4) Dichlorodifluoromethane	0.000	85	0	N.D.		
5) Chloromethane	0.000	50	0	N.D.		
6) Dichlorotetrafluoroethane	0.000	85	0	N.D.		
7) Vinyl Chloride	0.000	62	0	N.D.		
8) 1,3-Butadiene	0.000	54	0	N.D.		
9) Bromomethane	0.000	94	0	N.D.		
10) Ethylene oxide	0.000	29	0	N.D.		
11) Chloroethane	0.000	64	0	N.D.		
12) Trichlorofluoromethane	0.000	101	0	N.D.		
13) Acrolein	16.556	56	87	0.0171	ppbv #	85
14) 1,1-Dichloroethene	0.000	61	0	N.D.		
15) Trichlorotrifluoroethane	16.770	101	84	0.0028	ppbv	97
16) Carbon Disulfide	16.951	76	323	0.0086	ppbv	100
17) Acetonitrile	0.000	41	0	N.D.		
18) Methylene Chloride	0.000	49	0	N.D.		
19) Acrylonitrile	0.000	53	0	N.D.		
20) trans-1,2-Dichloroethy...	0.000	96	0	N.D.		
21) Methyl tert-Butyl Ether	0.000	73	0	N.D.		
22) 1,1-Dichloroethane	0.000	63	0	N.D.		
23) Chloroprene	0.000	53	0	N.D.		
24) Ethyl tert-Butyl Ether	0.000	59	0	N.D.		
25) cis-1,2-Dichloroethylene	0.000	61	0	N.D.		
26) Bromochloromethane	0.000	128	0	N.D.		
27) Chloroform	0.000	83	0	N.D.		
28) 1,1,1-Trichloroethane	0.000	97	0	N.D.		
29) Carbon Tetrachloride	0.000	117	0	N.D.		
30) Benzene	20.865	78	302	0.0052	ppbv	99
31) 1,2-Dichloroethane	0.000	62	0	N.D.		
32) tert-Amyl Methyl Ether	0.000	73	0	N.D.		
34) Trichloroethylene	21.726	130	117	0.0049	ppbv	93
35) Ethyl Acrylate	21.874	55	16	0.0006	ppbv #	76
36) 1,2-Dichloropropane	0.000	63	0	N.D.		
37) Methyl Methacrylate	22.094	41	104	0.0049	ppbv #	55
38) Bromodichloromethane	0.000	83	0	N.D.		
39) cis-1,3-Dichloropropene	0.000	75	0	N.D.		
40) Methyl Isobutyl Ketone	23.153	43	100	0.0031	ppbv #	87
41) Toluene	23.433	91	61	0.0009	ppbv	98
42) n-Octane	23.535	43	25	0.0008	ppbv #	31
43) trans-1,3-Dichloropropene	0.000	75	0	N.D.		
44) 1,1,2-Trichloroethane	0.000	97	0	N.D.		
45) Tetrachloroethylene	0.000	166	0	N.D.		
46) Dibromochloromethane	0.000	129	0	N.D.		
47) 1,2-Dibromoethane	0.000	107	0	N.D.		



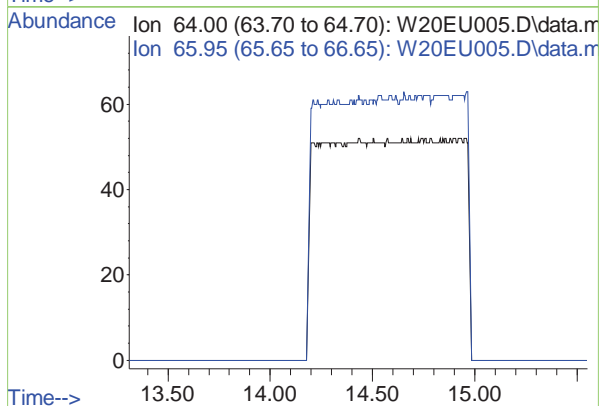
#10
Ethylene oxide
 Concen: N.D.
 Expected RT: 13.87 min
 Lab File: W20EU005.D
 Acq: 21 May 2020 07:20 pm
 Tgt Ion: 29

Sig	Exp Ratio
29	100
15	11.2
14	5.2



#11
 Chloroethane
 Concen: N.D.
 Expected RT: 14.43 min
 Lab File: W20EU005.D
 Acq: 21 May 2020 07:20 pm
 Tgt Ion: 64

Sig	Exp Ratio
64	100
66	32.5



Data Path : C:\gcms\1\data\MS6\W20EV\
 Data File : W20EV005.D
 Acq On : 22 May 2020 06:36 pm
 Operator : KR
 Sample : 2005052-CCV1
 Misc : CAL 4 0E19009
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 26 10:51:21 2020
 Quant Method : D:\MassHunter\GCMS\1\methods\0050007.M
 Quant Title : TO-15 by Selective Ion Analysis
 QLast Update : Thu May 21 09:42:48 2020
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.30min
 Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	ISS IS-Hexane-d14	1.000	1.000	0.0	101	0.00
2	CT Acetylene	0.244	0.236	3.3	101	0.00
3	CT Propylene/Propane	0.330	0.315	4.5	100	0.00
4	CT Dichlorodifluoromethane	1.290	1.219	5.5	98	0.00
5	CT Chloromethane	0.541	0.525	3.0	102	0.00
6	CT Dichlorotetrafluoroethane	1.538	1.484	3.5	100	0.00
7	CT Vinyl Chloride	0.536	0.515	3.9	100	0.00
8	CT 1,3-Butadiene	0.352	0.346	1.7	98	0.00
9	CT Bromomethane	0.620	0.610	1.6	99	0.00
10	CT Ethylene oxide	0.116	0.128	-10.3	105	0.00
11	CT Chloroethane	0.224	0.229	-2.2	102	0.00
12	CT Trichlorofluoromethane	1.103	1.057	4.2	98	0.00
13	CT Acrolein	0.172	0.172	0.0	106	0.00
14	CT 1,1-Dichloroethene	0.515	0.508	1.4	101	0.00
15	CT Trichlorotrifluoroethane	0.994	0.969	2.5	101	0.00
16	CT Carbon Disulfide	1.268	1.234	2.7	99	0.00
17	CT Acetonitrile	0.285	0.287	-0.7	108	0.00
18	CT Methylene Chloride	0.307	0.305	0.7	103	0.00
19	CT Acrylonitrile	0.281	0.502	-78.6#	206#	0.00
20	CT trans-1,2-Dichloroethylene	0.499	0.640	-28.3	163#	0.00
21	CT Methyl tert-Butyl Ether	1.093	1.269	-16.1	156#	0.00
22	CT 1,1-Dichloroethane	0.991	0.987	0.4	102	0.00
23	CT Chloroprene	0.578	0.559	3.3	99	0.00
24	CT Ethyl tert-Butyl Ether	1.424	1.439	-1.1	104	0.00
25	CT cis-1,2-Dichloroethylene	0.690	0.696	-0.9	103	0.00
26	CT Bromochloromethane	0.572	0.560	2.1	101	0.00
27	CT Chloroform	1.134	1.129	0.4	102	0.00
28	CT 1,1,1-Trichloroethane	1.079	1.047	3.0	100	0.00
29	CT Carbon Tetrachloride	0.918	0.881	4.0	99	0.00
30	CT Benzene	1.955	1.953	0.1	102	0.00
31	CT 1,2-Dichloroethane	0.437	0.444	-1.6	104	0.00
32	CT tert-Amyl Methyl Ether	1.399	1.399	0.0	103	0.00
33	ISS IS-1,4-Difluorobenzene	1.000	1.000	0.0	102	0.00
34	CT Trichloroethylene	0.314	0.324	-3.2	106	0.00
35	CT Ethyl Acrylate	0.331	0.330	0.3	106	0.00
36	CT 1,2-Dichloropropane	0.292	0.295	-1.0	106	0.00
37	CT Methyl Methacrylate	0.281	0.282	-0.4	106	0.00
38	CT Bromodichloromethane	0.405	0.405	0.0	104	0.00
39	CT cis-1,3-Dichloropropene	0.182	0.182	0.0	108	0.00
40	CT Methyl Isobutyl Ketone	0.429	0.426	0.7	105	0.00
41	CT Toluene	0.869	0.890	-2.4	104	0.00
42	CT n-Octane	0.422	0.459	-8.8	106	0.00
43	CT trans-1,3-Dichloropropene	0.123	0.118	4.1	109	0.00
44	CT 1,1,2-Trichloroethane	0.270	0.275	-1.9	105	0.00
45	CT Tetrachloroethylene	0.489	0.479	2.0	101	0.00
46	CT Dibromochloromethane	0.482	0.486	-0.8	104	0.00
47	CT 1,2-Dibromoethane	0.203	0.202	0.5	109	0.00

Analytical Standard Record

Eastern Research Group

0E19009

Description:	2.50 ppbv ICal	Expires:	06/18/20
Standard Type:	Calibration Stan	Prepared:	05/19/20
Solvent:	Scientific Air	Prepared By:	Kelly Barnes
Final Volume (mls):	6000	Department:	Air Toxics
Vials:	1	Last Edit:	05/19/20 13:07 by KEB

canister# 3222

Analyte	CAS Number	Concentration	Units
Acetylene	74-86-2	0.0023	ppmv
Chloroprene	126-99-8	0.002625	ppmv
Chloromethane	74-87-3	0.00255	ppmv
Chloroform	67-66-3	0.002575	ppmv
Chloroethane	75-00-3	0.00254	ppmv
Chlorobenzene	108-90-7	0.002575	ppmv
Carbon Tetrachloride	56-23-5	0.002955	ppmv
Carbon Disulfide	75-15-0	0.002525	ppmv
Bromomethane	74-83-9	0.00253	ppmv
Bromoform	75-25-2	0.00244	ppmv
Bromodichloromethane	75-27-4	0.00241	ppmv
Bromochloromethane	74-97-5	0.002585	ppmv
Benzene	71-43-2	0.00273	ppmv
1,1,1-Trichloroethane	71-55-6	0.00255	ppmv
Acrolein	107-02-8	0.001915	ppmv
Dibromochloromethane	124-48-1	0.002445	ppmv
Acetonitrile	75-05-8	0.002135	ppmv
1,3-Butadiene	106-99-0	0.00233	ppmv
1,3,5-Trimethylbenzene	108-67-8	0.002455	ppmv
1,2-Dichloropropane	78-87-5	0.002485	ppmv
1,2-Dichloroethane	107-06-2	0.002625	ppmv
1,2-Dibromoethane	106-93-4	0.002595	ppmv
1,2,4-Trimethylbenzene	95-63-6	0.00241	ppmv
1,2,4-Trichlorobenzene	120-82-1	0.001955	ppmv
1,1-Dichloroethene	75-35-4	0.00269	ppmv
1,1-Dichloroethane	75-34-3	0.002615	ppmv
1,1,2-Trichloroethane	79-00-5	0.00256	ppmv
1,1,2,2-Tetrachloroethane	79-34-5	0.00253	ppmv
Acrylonitrile	107-13-1	0.002225	ppmv
Methyl tert-Butyl Ether	1634-04-4	0.0024	ppmv

Reviewed By

Date

Analytical Standard Record

Eastern Research Group

OE19009

Trichlorotrifluoroethane	76-13-1	0.002615	ppmv
Trichlorofluoromethane	75-69-4	0.002325	ppmv
Trichloroethylene	79-01-6	0.00241	ppmv
trans-1,3-Dichloropropene	10061-02-6	0.00254	ppmv
trans-1,2-Dichloroethylene	156-60-5	0.002545	ppmv
Toluene	108-88-3	0.002645	ppmv
Tetrachloroethylene	127-18-4	0.00255	ppmv
tert-Amyl Methyl Ether	994-05-8	0.00244	ppmv
Styrene	100-42-5	0.00246	ppmv
Propylene	115-07-1	0.002415	ppmv
p-Dichlorobenzene	106-46-7	0.002435	ppmv
o-Xylene	95-47-6	0.00253	ppmv
cis-1,2-Dichloroethylene	156-59-2	0.002605	ppmv
n-Octane	111-65-9	0.002615	ppmv
cis-1,3-Dichloropropene	10061-01-5	0.002535	ppmv
Methyl Methacrylate	80-62-6	0.002405	ppmv
Methyl Isobutyl Ketone	108-10-1	0.002335	ppmv
m-Dichlorobenzene	541-73-1	0.002275	ppmv
m,p-Xylene	108-38-3, 106-42-3	0.00488	ppmv
Hexachloro-1,3-butadiene	87-68-3	0.001945	ppmv
Ethylene oxide	75-21-8	0.0024725	ppmv
Ethylbenzene	100-41-4	0.00255	ppmv
Ethyl tert-Butyl Ether	637-92-3	0.002425	ppmv
Ethyl Acrylate	140-88-5	0.00246	ppmv
Dichlorotetrafluoroethane	76-14-2	0.002735	ppmv
Dichloromethane	75-09-2	0.0027	ppmv
Dichlorodifluoromethane	75-71-8	0.0024	ppmv
Vinyl chloride	75-01-4	0.00256	ppmv
o-Dichlorobenzene	95-50-1	0.002315	ppmv

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
9K13003	TO-15 Primary Primary Stock	Stan11/13/19	** Vendor **	11/05/20	11/13/19 13:45 by RMB	30
9L18017	Ethylene Oxide primary Stock	Star12/10/19	Mitch Howell	12/10/20	01/06/20 14:06 by MH	15

Reviewed By

Date

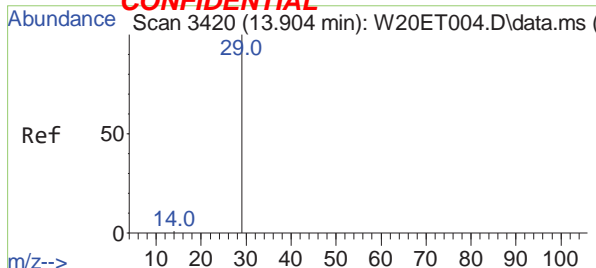
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 Data File : W20EV005.D
 Acq On : 22 May 2020 06:36 pm
 Operator : KR
 Sample : 2005052-CCV1
 Misc : CAL 4 0E19009
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 26 10:51:21 2020
 Quant Method : D:\MassHunter\GCMS\1\methods\0050007.M
 Quant Title : TO-15 by Selective Ion Analysis
 QLast Update : Thu May 21 09:42:48 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) IS-Hexane-d14	18.373	66	161376	5.1840	ppbv	0.00
33) IS-1,4-Difluorobenzene	21.395	114	474019	5.3120	ppbv	0.00
48) IS-Chlorobenzene-d5	25.350	117	313959	5.0560	ppbv	0.00

System Monitoring Compounds

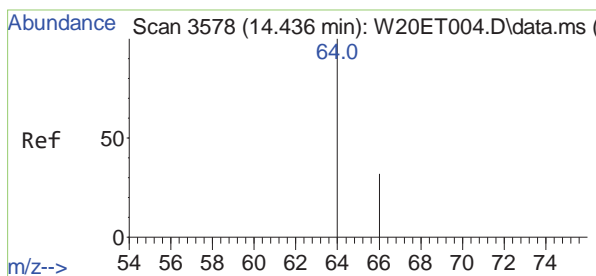
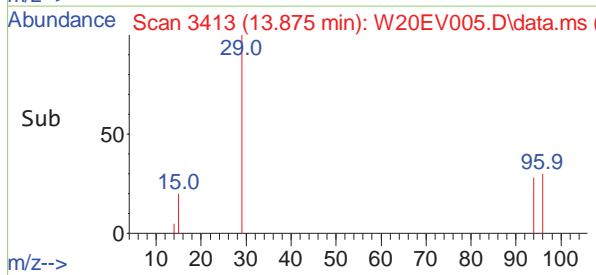
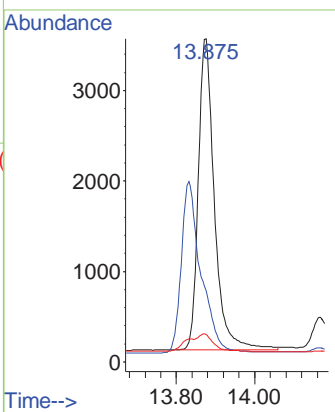
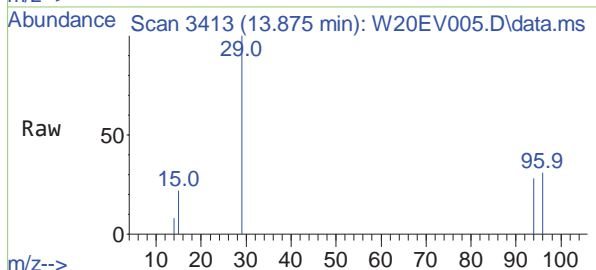
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Acetylene	4.264	26	16892	2.2279	ppbv	100
3) Propylene/Propane	7.177	41	23646	2.3027	ppbv	100
4) Dichlorodifluoromethane	8.262	85	91067	2.2677	ppbv	100
5) Chloromethane	10.758	50	41713	2.4781	ppbv	100
6) Dichlorotetrafluoroethane	10.815	85	126327	2.6378	ppbv	98
7) Vinyl Chloride	11.993	62	41056	2.4607	ppbv	100
8) 1,3-Butadiene	12.381	54	25082	2.2922	ppbv	99
9) Bromomethane	13.832	94	48058	2.4903	ppbv	100
10) Ethylene oxide	13.875	29	9826m	2.7241	ppbv	
11) Chloroethane	14.430	64	18091	2.5946	ppbv	100
12) Trichlorofluoromethane	15.327	101	76489	2.2277	ppbv	100
13) Acrolein	16.506	56	10277	1.9243	ppbv	100
14) 1,1-Dichloroethene	16.645	61	42499	2.6507	ppbv	99
15) Trichlorotrifluoroethane	16.766	101	78867	2.5475	ppbv	98
16) Carbon Disulfide	16.947	76	97006	2.4580	ppbv	100
17) Acetonitrile	17.399	41	19077	2.1470	ppbv	100
18) Methylene Chloride	17.700	49	25597	2.6811	ppbv	98
19) Acrylonitrile	18.124	53	34780	3.9735	ppbv	95
20) trans-1,2-Dichloroethy...	18.159	96	50712	3.2679	ppbv	90
21) Methyl tert-Butyl Ether	18.171	73	94774	2.7862	ppbv	97
22) 1,1-Dichloroethane	18.864	63	80375	2.6058	ppbv	100
23) Chloroprene	18.959	53	45716	2.5410	ppbv	100
24) Ethyl tert-Butyl Ether	19.456	59	108660	2.4508	ppbv	99
25) cis-1,2-Dichloroethylene	19.698	61	56415	2.6247	ppbv	99
26) Bromochloromethane	20.026	128	45089	2.5300	ppbv	98
27) Chloroform	20.163	83	90515	2.5641	ppbv	100
28) 1,1,1-Trichloroethane	20.387	97	83090	2.4740	ppbv	99
29) Carbon Tetrachloride	20.597	117	80998	2.8359	ppbv	100
30) Benzene	20.864	78	165946	2.7273	ppbv	99
31) 1,2-Dichloroethane	20.929	62	36250	2.6631	ppbv	100
32) tert-Amyl Methyl Ether	21.022	73	106241	2.4390	ppbv	99
34) Trichloroethylene	21.725	130	69585	2.4805	ppbv	98
35) Ethyl Acrylate	21.780	55	72548	2.4550	ppbv	99
36) 1,2-Dichloropropane	22.071	63	65404	2.5095	ppbv	99
37) Methyl Methacrylate	22.077	41	60466	2.4151	ppbv	99
38) Bromodichloromethane	22.401	83	87054	2.4114	ppbv	100
39) cis-1,3-Dichloropropene	22.968	75	41102	2.5249	ppbv	100
40) Methyl Isobutyl Ketone	23.133	43	88700	2.3145	ppbv	99
41) Toluene	23.432	91	209972	2.7076	ppbv	100
42) n-Octane	23.528	43	107155	2.8424	ppbv	98
43) trans-1,3-Dichloropropene	23.706	75	26685	2.4340	ppbv	99
44) 1,1,2-Trichloroethane	23.986	97	62716	2.6018	ppbv	99
45) Tetrachloroethylene	24.139	166	109084	2.5013	ppbv	99
46) Dibromochloromethane	24.533	129	105944	2.4646	ppbv	100
47) 1,2-Dibromoethane	24.722	107	46702	2.5762	ppbv	100



#10
Ethylene oxide
 Concen: 2.724 ppbv m
 RT: 13.875 min Scan# 3413
 Delta R.T. 0.003 min
 Lab File: W20EV005.D
 Acq: 22 May 2020 06:36 pm

Tgt Ion: 29 Resp: 9826

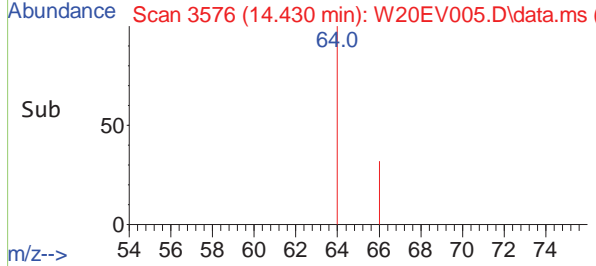
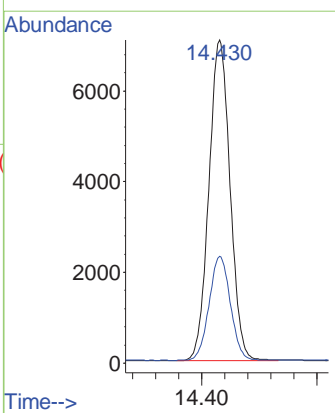
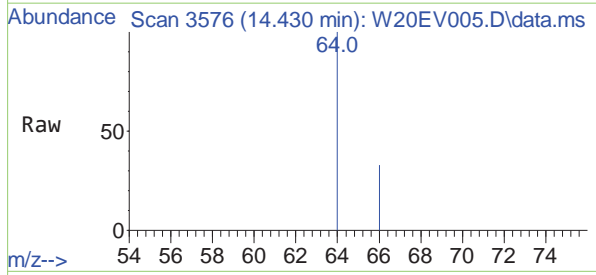
Ion	Ratio	Lower	Upper
29	100		
15	12.0	7.8	14.6
14	5.5	3.6	6.8



#11
 Chloroethane
 Concen: 2.595 ppbv
 RT: 14.430 min Scan# 3576
 Delta R.T. -0.000 min
 Lab File: W20EV005.D
 Acq: 22 May 2020 06:36 pm

Tgt Ion: 64 Resp: 18091

Ion	Ratio	Lower	Upper
64	100		
66	32.4	22.7	42.3



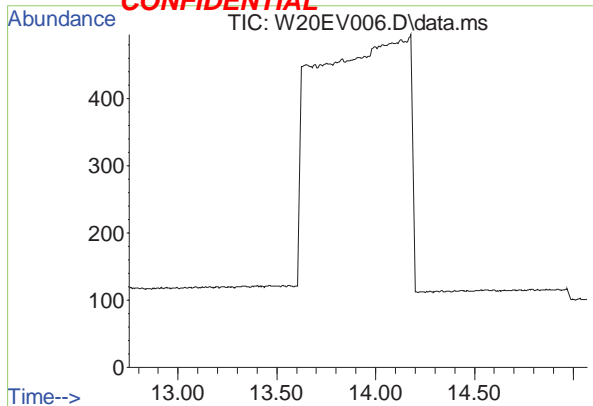
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 Data File : W20EV006.D
 Acq On : 22 May 2020 07:31 pm
 Operator : KR
 Sample : B0E2203-BLK1
 Misc : B-H1-848
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 24 16:38:00 2020
 Quant Method : D:\MassHunter\GCMS\1\methods\0050007.M
 Quant Title : T0-15 by Selective Ion Analysis
 QLast Update : Thu May 21 09:42:48 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) IS-Hexane-d14	18.366	66	159420	5.1840	ppbv	0.00
33) IS-1,4-Difluorobenzene	21.396	114	418983	5.3120	ppbv	0.00
48) IS-Chlorobenzene-d5	25.351	117	229361	5.0560	ppbv	0.00

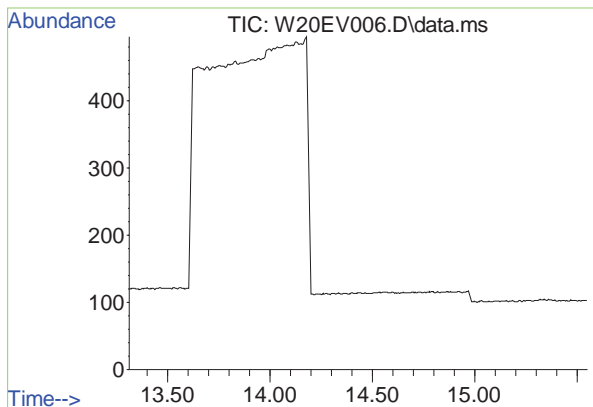
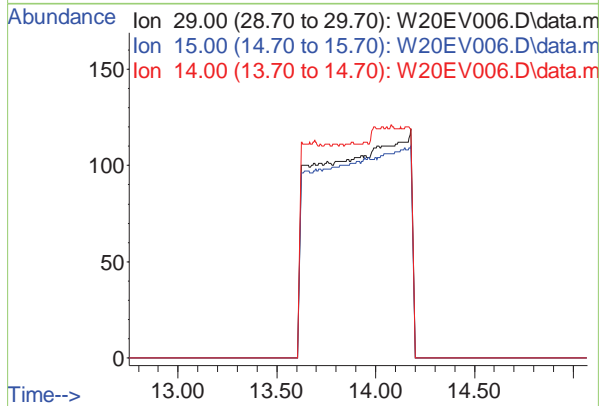
System Monitoring Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Acetylene	0.000	26	0	N.D.		
3) Propylene/Propane	0.000	41	0	N.D.		
4) Dichlorodifluoromethane	0.000	85	0	N.D.		
5) Chloromethane	0.000	50	0	N.D.		
6) Dichlorotetrafluoroethane	0.000	85	0	N.D.		
7) Vinyl Chloride	0.000	62	0	N.D.		
8) 1,3-Butadiene	0.000	54	0	N.D.		
9) Bromomethane	0.000	94	0	N.D.		
10) Ethylene oxide	0.000	29	0	N.D.		
11) Chloroethane	0.000	64	0	N.D.		
12) Trichlorofluoromethane	0.000	101	0	N.D.		
13) Acrolein	16.542	56	116	0.0220	ppbv	97
14) 1,1-Dichloroethene	0.000	61	0	N.D.		
15) Trichlorotrifluoroethane	16.756	101	85	0.0028	ppbv	92
16) Carbon Disulfide	16.942	76	349	0.0090	ppbv	100
17) Acetonitrile	17.433	41	35	0.0040	ppbv #	27
18) Methylene Chloride	0.000	49	0	N.D.		
19) Acrylonitrile	18.141	53	21	0.0024	ppbv	89
20) trans-1,2-Dichloroethy...	0.000	96	0	N.D.		
21) Methyl tert-Butyl Ether	0.000	73	0	N.D.		
22) 1,1-Dichloroethane	0.000	63	0	N.D.		
23) Chloroprene	0.000	53	0	N.D.		
24) Ethyl tert-Butyl Ether	0.000	59	0	N.D.		
25) cis-1,2-Dichloroethylene	0.000	61	0	N.D.		
26) Bromochloromethane	0.000	128	0	N.D.		
27) Chloroform	0.000	83	0	N.D.		
28) 1,1,1-Trichloroethane	20.387	97	16	0.0005	ppbv #	40
29) Carbon Tetrachloride	0.000	117	0	N.D.		
30) Benzene	20.863	78	357	0.0059	ppbv	99
31) 1,2-Dichloroethane	0.000	62	0	N.D.		
32) tert-Amyl Methyl Ether	0.000	73	0	N.D.		
34) Trichloroethylene	21.726	130	157	0.0063	ppbv	92
35) Ethyl Acrylate	21.797	55	33	0.0013	ppbv #	76
36) 1,2-Dichloropropane	0.000	63	0	N.D.		
37) Methyl Methacrylate	22.094	41	145	0.0066	ppbv #	59
38) Bromodichloromethane	0.000	83	0	N.D.		
39) cis-1,3-Dichloropropene	0.000	75	0	N.D.		
40) Methyl Isobutyl Ketone	23.147	43	133	0.0039	ppbv #	92
41) Toluene	23.427	91	86	0.0013	ppbv	100
42) n-Octane	23.529	43	39	0.0012	ppbv #	84
43) trans-1,3-Dichloropropene	23.707	75	18	0.0019	ppbv #	43
44) 1,1,2-Trichloroethane	0.000	97	0	N.D.		
45) Tetrachloroethylene	0.000	166	0	N.D.		
46) Dibromochloromethane	24.527	129	21	0.0006	ppbv #	81
47) 1,2-Dibromoethane	24.720	107	24	0.0015	ppbv #	2



#10
Ethylene oxide
 Concen: N.D.
 Expected RT: 13.87 min
 Lab File: W20EV006.D
 Acq: 22 May 2020 07:31 pm
 Tgt Ion: 29

Sig	Exp Ratio
29	100
15	11.2
14	5.2



#11
 Chloroethane
 Concen: N.D.
 Expected RT: 14.43 min
 Lab File: W20EV006.D
 Acq: 22 May 2020 07:31 pm
 Tgt Ion: 64

Sig	Exp Ratio
64	100
66	32.5

