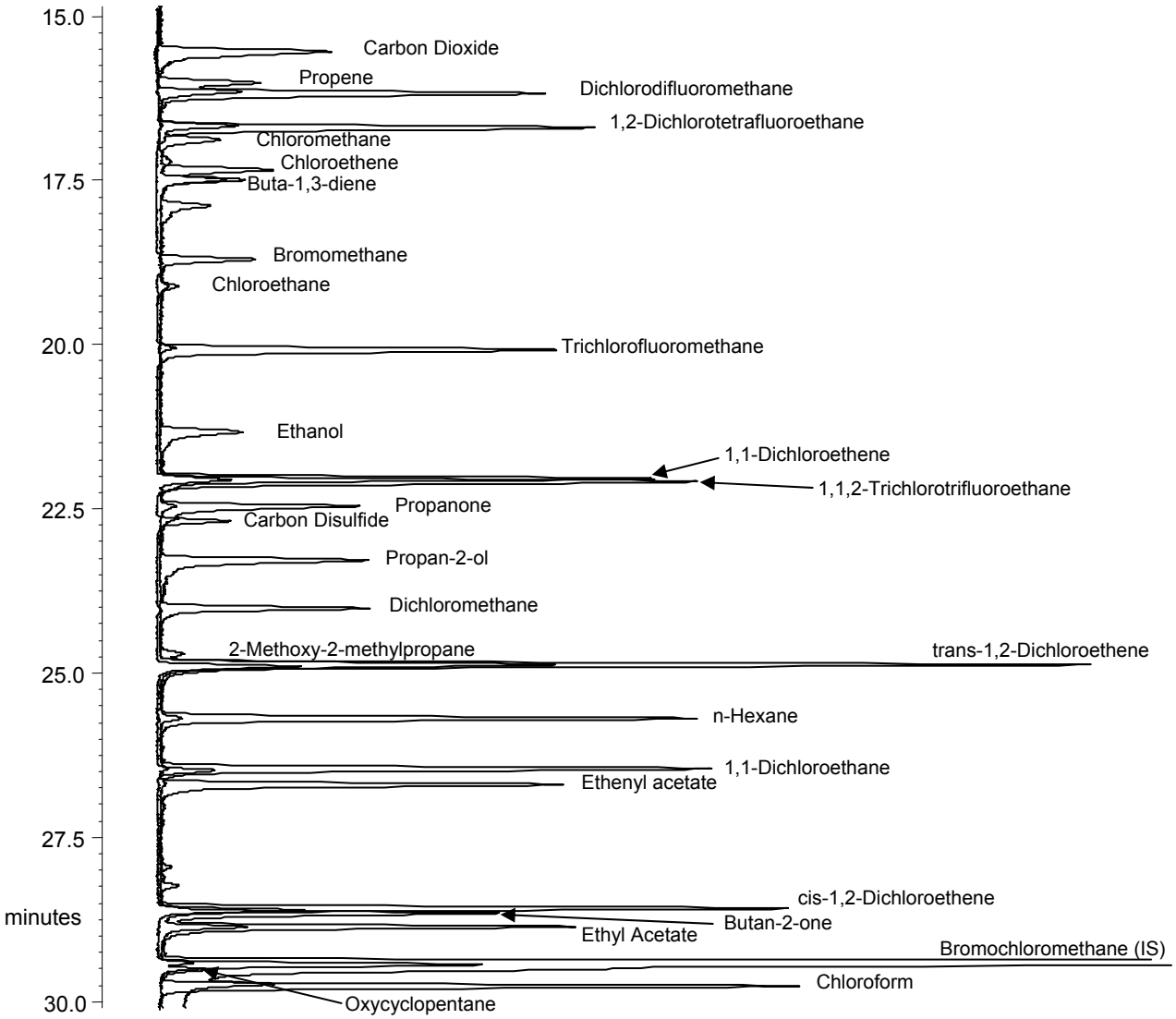
Peak Assignments for TO15 Analytes with Varian CP624 Capillary Column

Technique: GC Capillary with MS Detection

Column: Varian CP-624 CB, 60 m x 0.25 mm ID, df = 1.4 µm, P/N CP7413
Temperature: 20 °C (15 min), 3 °C/min to 100 °C, 9 °C/min to 250 °C
Carrier gas: Helium, 1 ml/min
Injection: Cryotrapping following EPA TO15 protocol
Detector: Varian 240 Ion Trap GCMS with MSMS
Sample: Restek TO15 65-Component Mix, diluted to 10 ppbV + Internal Standards and Surrogates
Sample Conc: 5 ppbV
Sample Vol: 150 ml



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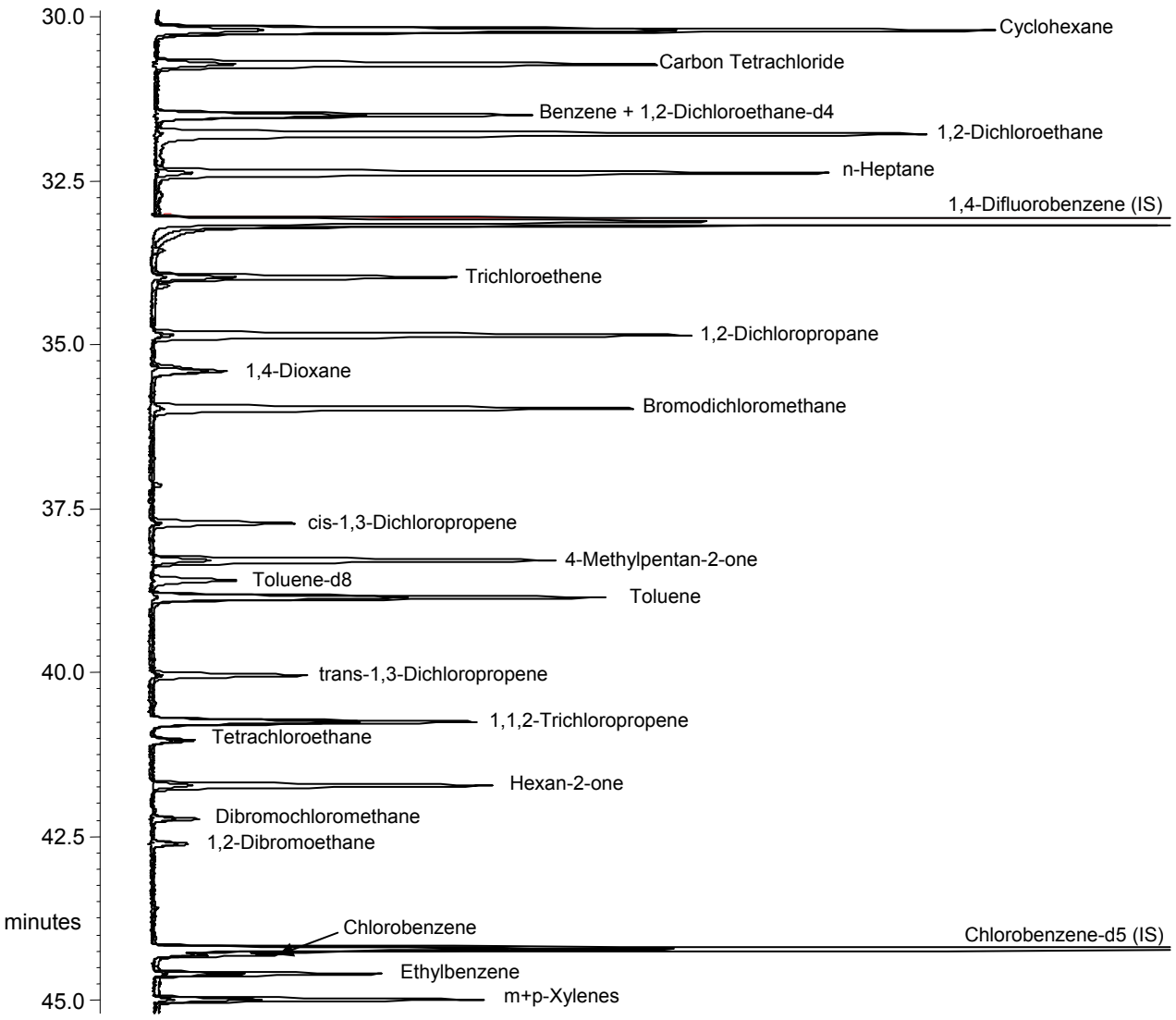
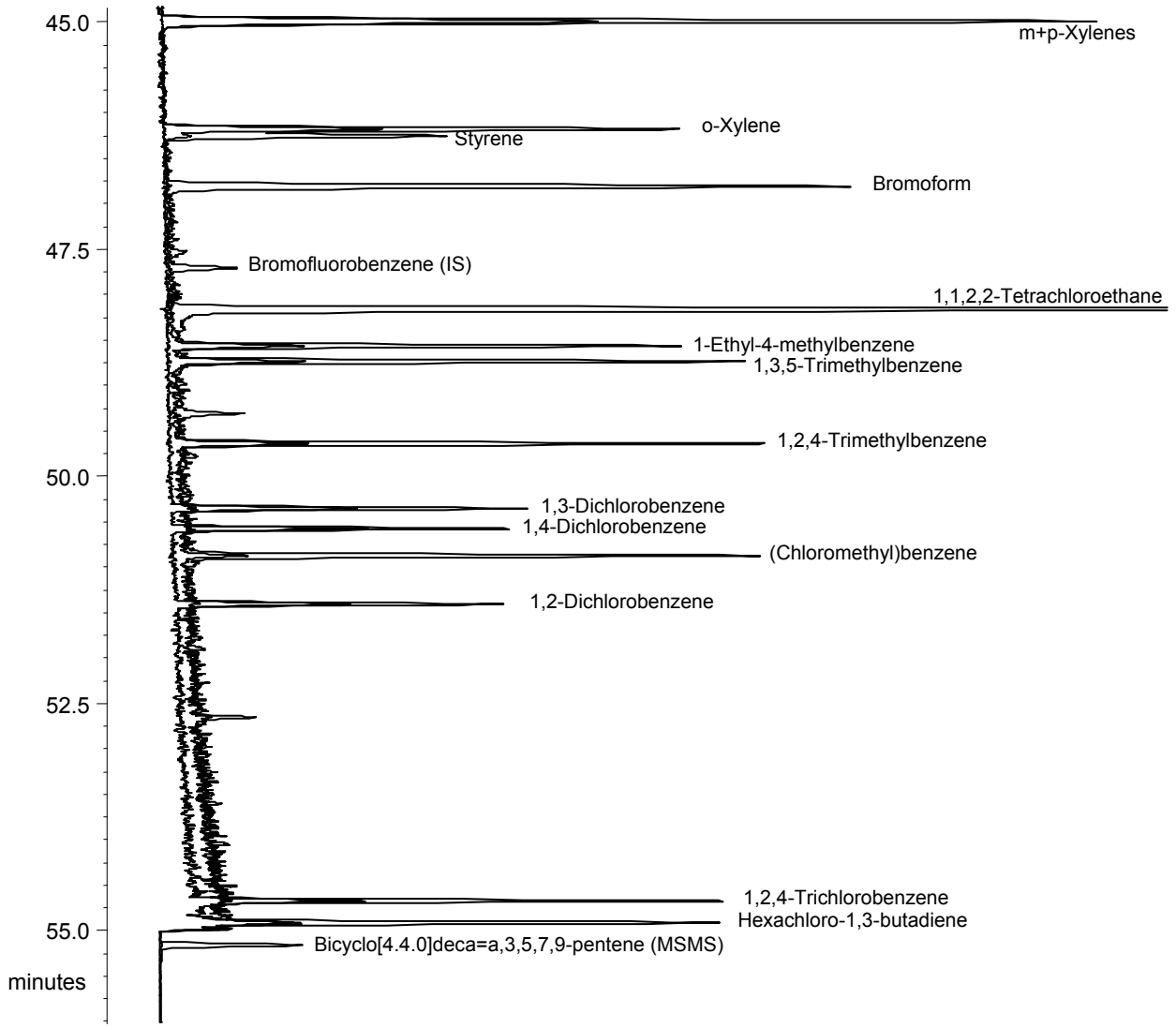


Interconversion of IUPAC and Common Names			
IUPAC Label	**Common Name**	**IUPAC Label**	**Common Name**
Propene	Propylene	2-Methoxy-2-methylpropane	Methyl-tert-butyl ether
Dichlorodifluoromethane	Freon 12	Ethenyl acetate	Vinyl Acetate
1,2-Dichlorotetrafluoroethane	Freon 114	Butan-2-one	Methyl ethyl ketone
Chloroethene	Vinyl Chloride	Oxacyclopentane	Tetrahydrofuran
Buta-1,3-diene	1,3-Butadiene	Trichloroethene	Trochloroethylene
Trichlorofluoromethane	Freon 11	4-Methylpentan-2-one	Methyl isobutyl ketone
1,1-Dichloroethene	1,1-Dichloroethylene	Tetrachloroethene	Tetrachloroethylene
112 Trichlorotrifluoroethane	Freon 113	Hexan-2-one	Methyl butyl ketone
Propanone	Acetone	1-Ethyl-4-methylbenzene	4-Ethyltoluene
Propan-2-ol	2-Propanol	(Chloromethyl)benzene	Benzyl Chloride
Dichloromethane	Methylene Chloride	Bicyclo[4.4.0]deca-a,3,5,7,9-pentene	Naphthalene



Notes:

1. On-column injection performed at 11.00 minutes. Prior interval involves trapping processes.
2. All compound labels are per IUPAC protocol.
3. Peaks are displayed using their Quan Ions only.
4. Combining several Quan Ions for an analyte helps to enhance detection by making the peak larger, for example: Propene with 39+41+42 ions.
5. Using 91+106 Quan ions for xylenes aids in extending the dynamic range for these analytes.

IUPAC Name	Ret Time	Quan Ion(s)	Ref Ions	IUPAC Name	Ret Time	Quan Ion(s)	Ref Ions
Propene	16.016	39+41+42	40	Trichloroethene	33.967	95	60+97+130 +132+134
Dichlorodifluoromethane	16.152	85	87+101	1,2-Dichloropropane	34.855	63	+62+64 +65+76
1,2-Dichlorotetrafluoroethane	16.671	85	87+101	1,4-Dioxane	35.402	88	57+58
Chloromethane	16.886	50	52	Bromodichloromethane	35.969	83	85+127+129
Chloroethene	17.336	62	64	cis-1,3 Dichloropropene	37.722	75	77+110+112
Buta-1,3-diene	17.492	39	50+51 +53+54	4-Methylpentan-2-one	38.289	85	57+58+100
Bromomethane	18.674	94+96	93	Toluene-d8 (Surr)	38.590	98	70+100
Chloroethane	19.113	49	47+51 +60+63	Toluene	38.786	91	65
Trichlorofluoromethane	20.051	101	66+103	trans-1,3-Dichloropropene	40.043	75	77+110+112
Ethanol	21.331	45	43	1,1,2-Trichloroethane	40.750	97	61+83 +85+99
1,1-Dichloroethene	22.043	61	60+63 +96+98	Tetrachloroethene	41.038	166	129+131 +164+168
1,1,2-Trichlorotrifluoroethane	22.066	101	66+85+103+ 151+153	Hexan-2-one	41.722	58	43+57+85
Propanone	22.458	43	58	Dibromochloromethane	42.237	129	127+131
Carbon Disulfide	22.660	76	44	1,2-Dibromoethane	42.612	109	107
Propan-2-ol	23.285	45	43	Chlorobenzene-d5 (IS)	44.214	117	52+54 +82+119
Dichloromethane	24.014	49	51+84+86	Chlorobenzene	44.305	112	50+51 +77+114
2-Methoxy-2-methylpropane	24.867	73	39+41 +43+57	Ethylbenzene	44.600	91	65+106
trans-1,2-Diclhloroethene	24.872	61	60+63 +96+98	m,p-Xylenes	44.993	91+106	63+65+105
n-Hexane	25.690	41	42+43 +56+57	o-Xylene	46.178	91+106	63+65+105
1,1-Dichloroethane	26.456	63	65	Styrene	46.254	104	51+78+103
Ethenyl acetate	26.701	43	-	Bromoform	46.805	173	79+81+91 +92+93+94 +171+175
cis-1,2-Dichloroethene	28.581	61	60+63 +96+98	1,4-Bromofluorobenzene (Tune)[1]	47.704	95	75+174+176
Butan-2-one	28.655	43	57+72	1,1,2,2-Tetrachloroethane	48.160	83	85+131+133
Ethyl acetate	28.863	43	55+61+70	1-Ethyl-4-methylbenzene	48.565	105	91+120
Bromochloromethane (IS)[2]	29.409	49	51+93+95 +128+130	1,3,5-Trimethylbenzene	48.734	105	91+120
Oxacyclopentane	29.511	41	39+42 +43+71	1,2,4-Trimethylbenzene	49.641	105	91+120
Chloroform	29.738	83	85	1,3-Dichlorobenzene	50.352	146	75+111+148
1,1,1-Trichloroethane	30.197	97	61+99	1,4-Dichlorobenzene	50.572	146	75+111+148
Cyclohexane	30.205	56	55+69 +83+84	(Chloromethyl)benzene	50.874	91	63+65+126
Carbon Tetrachloride	30.722	119	82+84 +117+121	1,2-Dichlorobenzene	51.404	146	75+111+148
Benzene	31.495	78	50+51 +52+77	1,2,4-Trichlorobenzene	54.671	180	109+145+147 +182+184
1,2-Dichloroethane-d4 (Surr)[3]	31.500	65	51+67	Hexachloro-1,3-butadiene	54.913	225	118+141+143 188+190+192 +223+227 +258+260+262
1,2-Dichloroethane	31.783	62	49+64	Hexachloro-1,3-butadiene (MSMS)	54.913	190	-
n-Heptane	32.376	57	43+56+70	Bicyclo[4.4.0]deca-a,3,5,7,9-pentene	55.158	128	-
1,4-Difluorobenzene (IS)	33.119	114	63+88	Bicyclo[4.4.0]deca-a,3,5,7,9-pentene (MSMS)	55.158	102	-

1 Tune compound
2 Internal standard
3 Surrogate compound