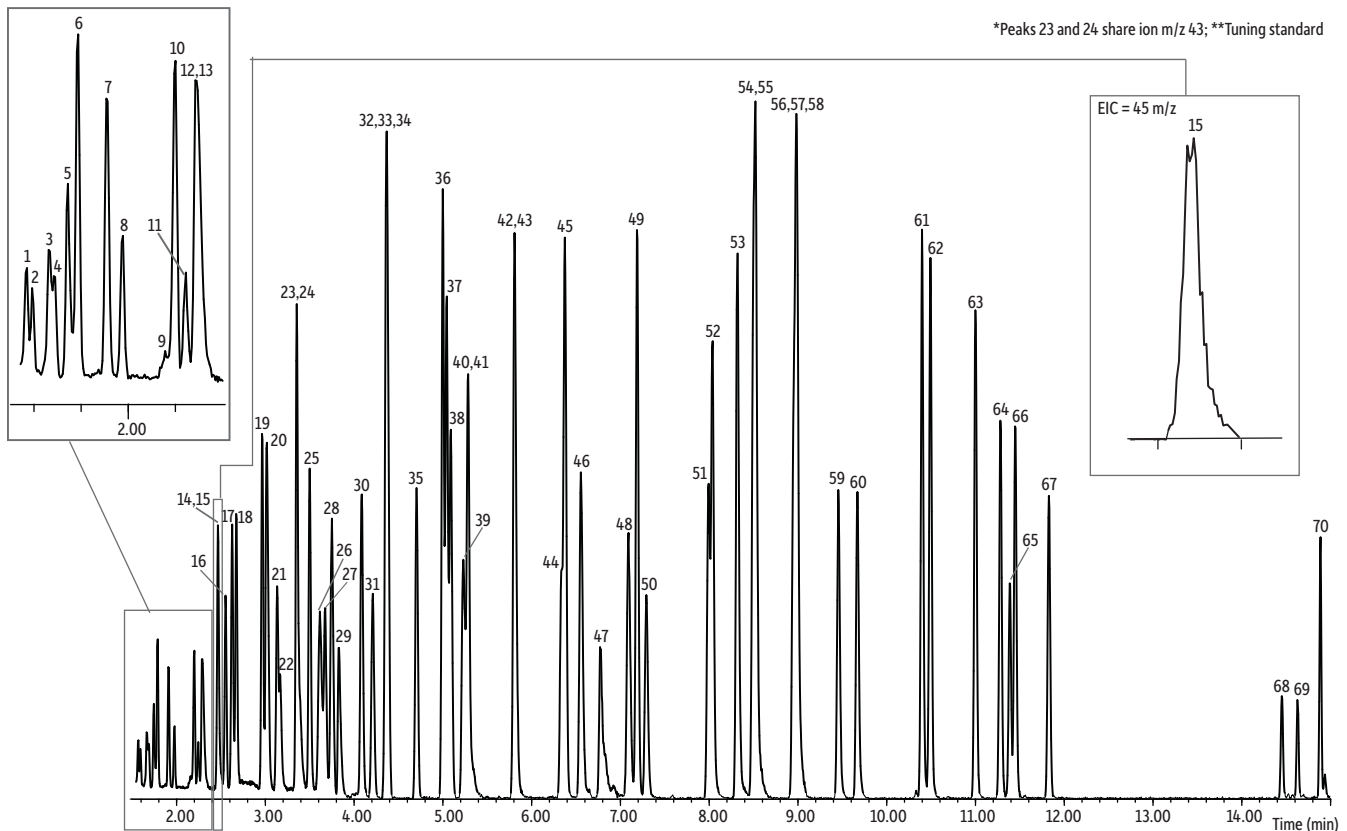


TO-15 65 Component Mix on Rxi®-5Sil MS (30 m)

Peaks	t _R (min)	Peaks	t _R (min)	Peaks	t _R (min)
1. Propylene	1.57	21. 1,1-Dichloroethane	3.13	46. 1,1,2-Trichloroethane	6.55
2. Dichlorodifluoromethane (Freon® 12)	1.60	22. Vinyl acetate	3.17	47. 2-Hexanone (MBK)	6.77
3. Chloromethane	1.67	23. 2-Butanone (MEK)*	3.36	48. Dibromochloromethane	7.09
4. 1,2-Dichlorotetrafluoroethane (Freon® 114)	1.68	24. Hexane*	3.36	49. Tetrachloroethene	7.19
5. Vinyl chloride	1.74	25. <i>cis</i> -1,2-Dichloroethene	3.50	50. 1,2-Dibromoethane	7.29
6. 1,3-Butadiene	1.79	26. Ethyl acetate	3.62	51. Chlorobenzene-d5 (IS)	7.99
7. Bromomethane	1.91	27. Bromochloromethane (IS)	3.67	52. Chlorobenzene	8.04
8. Chloroethane	1.98	28. Chloroform	3.75	53. Ethylbenzene	8.32
9. Ethanol	2.16	29. Tetrahydrofuran	3.83	54. <i>m</i> -Xylene	8.52
10. Trichlorofluoromethane (Freon® 11)	2.20	30. 1,1,1-Trichloroethane	4.09	55. <i>p</i> -Xylene	8.52
11. Acrolein	2.25	31. 1,2-Dichloroethane	4.21	56. Styrene	8.95
12. Acetone	2.29	32. Benzene	4.36	57. <i>o</i> -Xylene	8.98
13. Acetonitrile (contaminant)	2.29	33. Carbon tetrachloride	4.37	58. Bromoform	9.00
14. 1,1-Dichloroethene	2.47	34. Cyclohexane	4.39	59. 1,1,2,2-Tetrachloroethane	9.46
15. Isopropyl alcohol	2.49	35. 1,4-Difluorobenzene (IS)	4.70	60. 4-Bromofluorobenzene**	9.67
16. 1,1,2-Trichlorotrifluoroethane (Freon® 113)	2.55	36. Heptane	5.00	61. 4-Ethyltoluene	10.40
17. Methylene chloride	2.63	37. Trichloroethylene	5.04	62. 1,3,5-Trimethylbenzene	10.49
18. Carbon disulfide	2.68	38. 1,2-Dichloropropane	5.09	63. 1,2,4-Trimethylbenzene	11.00
19. <i>trans</i> -1,2-Dichloroethene	2.97	39. Methyl methacrylate	5.23	64. 1,3-Dichlorobenzene	11.28
20. Methyl <i>tert</i> -butyl ether (MTBE)	3.02	40. Bromodichloromethane	5.28	65. Benzyl chloride	11.39
		41. 1,4-Dioxane	5.32	66. 1,4-Dichlorobenzene	11.45
		42. 4-Methyl-2-pentanone (MIBK)	5.81	67. 1,2-Dichlorobenzene	11.83
		43. <i>cis</i> -1,3-Dichloropropene	5.81	68. 1,2,4-Trichlorobenzene	14.46
		44. <i>trans</i> -1,3-Dichloropropene	6.33	69. Naphthalene	14.63
		45. Toluene	6.37	70. Hexachlorobutadiene	14.89

*Peaks 23 and 24 share ion m/z 43; **Tuning standard



GC_AR1157

Column Rxi®-5Sil MS, 30 m, 0.32 mm ID, 1.00 µm (cat.# 13654)
Sample TO-15 65 component mix (cat.# 34436)
 TO-14A internal standard/tuning mix (cat.# 34408)
Diluent: Nitrogen
Conc.: 10.0 ppbv 400 mL injection
Injection Direct
Oven
 Oven Temp: 32 °C (hold 1 min) to 150 °C at 9 °C/min to 230 °C at 33 °C/min
Carrier Gas He, constant flow
 Flow Rate: 1.5 mL/min
 Linear Velocity: 44 cm/sec @ 32 °C
Detector MS
 Mode: Scan
Scan Program:

Group	Start Time (min)	Scan Range (amu)	Scan Rate (scans/sec)
1	0	35-250	3.32

Transfer Line Temp.: 230 °C
 Analyzer Type: Quadrupole
 Source Temp.: 230 °C
 Quad Temp.: 150 °C

Electron Energy: 69.9 eV
Solvent Delay
 Time: 1.0 min
Tune Type: BFB
Ionization Mode: EI
Preconcentrator Nutech 8900DS
Trap 1 Settings
 Type/Sorbent: Glass beads
 Cooling temp: -155 °C
 Preheat temp: 5 °C
 Preheat time: 0 sec
 Desorb temp: 20 °C
 Desorb flow: 5 mL/min
 Desorb time: 360 sec
 Bakeout temp: 200 °C
 Flush flow: 120 mL/min
 Flush time: 60 sec
 Sweep flow: 120 mL/min
 Sweep time: 60 sec
Trap 2 Settings
 Type/Sorbent: Tenax®

Cooling temp: -35 °C
Desorb temp: 190 °C
Desorb time: 30 sec
Bakeout temp: 200 °C
Bakeout time: 10 sec
Cryofocuser
 Cooling temp: -160 °C
 Inject time: 140 sec
Internal Standard
 Purge flow: 100 mL/min
 Purge time: 6 sec
 Vol.: 100 mL
 ISTD flow: 100 mL/min
Standard
 Size: 200 mL
 Purge flow: 100 mL/min
 Purge time: 6 sec
 Sample flow: 100 mL/min
Instrument HP6890 GC & 5973 MSD
Acknowledgement Nutech Instruments / EST Analytical