

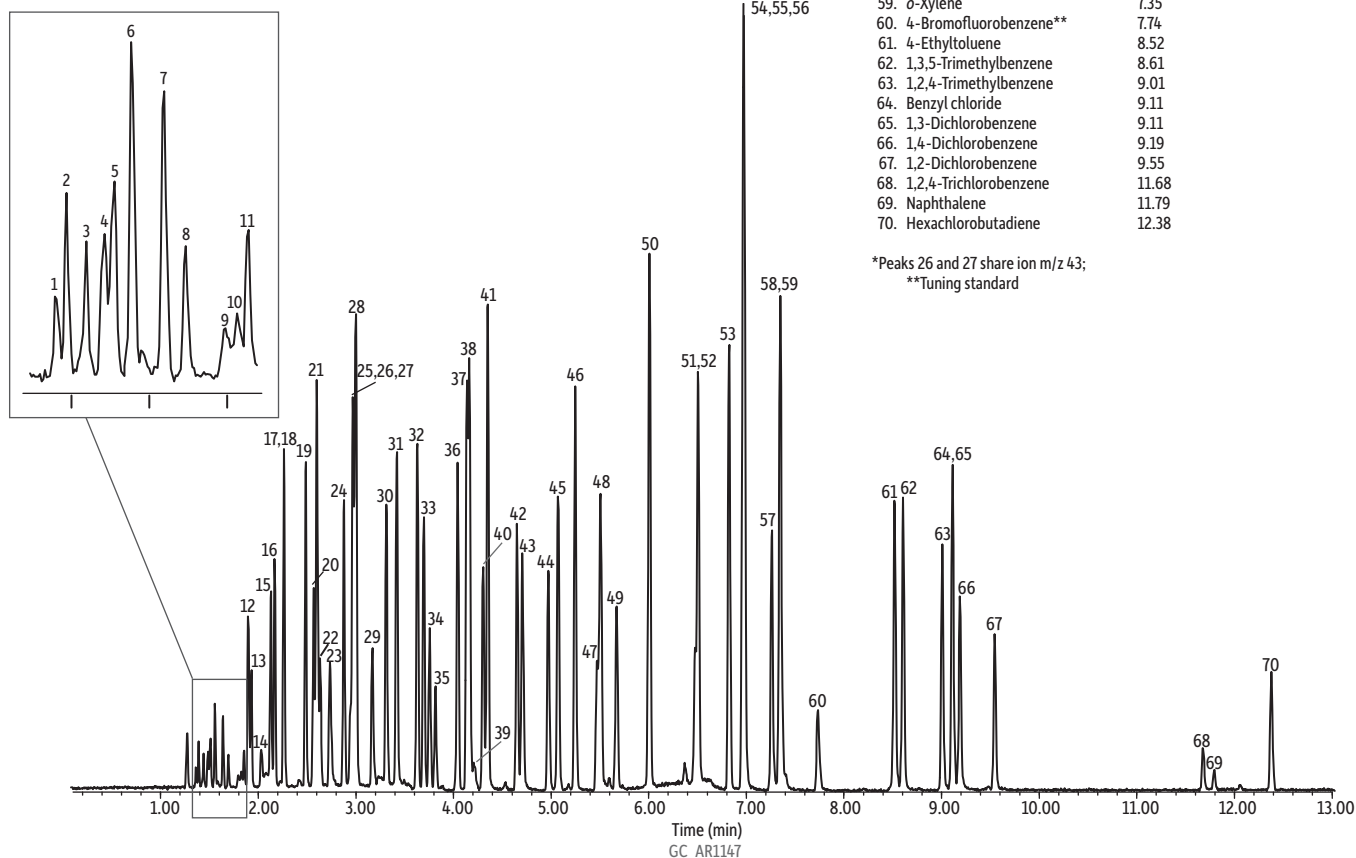
# TO-15 65 Component Mix on Rxi®-1ms (30 m)

Peaks	t <sub>r</sub> (min)
1. Propylene	1.37
2. Dichlorodifluoromethane (Freon® 12)	1.39
3. Chloromethane	1.44
4. 1,2-Dichlorotetrafluoroethane (Freon® 114)	1.49
5. Vinyl chloride	1.51
6. 1,3-Butadiene	1.56
7. Bromomethane	1.64
8. Chloroethane	1.70
9. Ethanol	1.80
10. Acetonitrile (contaminant)	1.83
11. Acrolein	1.86
12. Acetone	1.90
13. Trichlorofluoromethane (Freon® 11)	1.93
14. Isopropyl alcohol	2.03
15. 1,1-Dichloroethene	2.13
16. Methylene chloride	2.17
17. Carbon disulfide	2.26
18. 1,1,2-Trichlorotrifluoroethane (Freon® 113)	2.27

Peaks	t <sub>r</sub> (min)
19. <i>trans</i> -1,2-Dichloroethene	2.49
20. 1,1-Dichloroethane	2.57
21. Methyl <i>tert</i> -butyl ether (MTBE)	2.60
22. Vinyl acetate	2.64
23. 2-Butanone (MEK)	2.74
24. <i>cis</i> -1,2-Dichloroethene	2.88
25. Bromochloromethane (IS)	2.94
26. Hexane*	2.97
27. Ethyl acetate*	2.99
28. Chloroform	3.00
29. Tetrahydrofuran	3.17
30. 1,2-Dichloroethane	3.32
31. 1,1,1-Trichloroethane	3.42
32. Benzene	3.63
33. Carbon tetrachloride	3.70
34. Cyclohexane	3.76
35. 1,4-Difluorobenzene (IS)	3.82
36. 1,2-Dichloropropane	4.05

Peaks	t <sub>r</sub> (min)
37. Bromodichloromethane	4.14
38. Trichloroethylene	4.17
39. 1,4-Dioxane	4.21
40. Methyl methacrylate	4.31
41. Heptane	4.35
42. <i>cis</i> -1,3-Dichloropropene	4.65
43. 4-Methyl-2-pentanone (MIBK)	4.71
44. <i>trans</i> -1,3-Dichloropropene	4.98
45. 1,1,2-Trichloroethane	5.07
46. Toluene	5.25
47. 2-Hexanone (MBK)	5.47
48. Dibromochloromethane	5.51
49. 1,2-Dibromoethane	5.67
50. Tetrachloroethene	6.01
51. Chlorobenzene-d5 (IS)	6.48
52. Chlorobenzene	6.51
53. Ethylbenzene	6.83
54. <i>m</i> -Xylene	6.98
55. <i>p</i> -Xylene	6.98
56. Bromoform	6.98
57. Styrene	7.26
58. 1,1,2,2-Tetrachloroethane	7.35
59. <i>o</i> -Xylene	7.35
60. 4-Bromofluorobenzene**	7.74
61. 4-Ethyltoluene	8.52
62. 1,3,5-Trimethylbenzene	8.61
63. 1,2,4-Trimethylbenzene	9.01
64. Benzyl chloride	9.11
65. 1,3-Dichlorobenzene	9.11
66. 1,4-Dichlorobenzene	9.19
67. 1,2-Dichlorobenzene	9.55
68. 1,2,4-Trichlorobenzene	11.68
69. Naphthalene	11.79
70. Hexachlorobutadiene	12.38

\*Peaks 26 and 27 share ion m/z 43;  
\*\*Tuning standard



**Column** Rxi®-1ms, 30 m, 0.32 mm ID, 1.00 µm (cat.# 13354)  
**Sample** TO-15 65 component mix (cat.# 34436)  
 TO-14A internal standard/tuning mix (cat.# 34408)  
**Diluent:** Nitrogen  
**Conc.:** 10.0 ppbv 250 cc injection  
**Injection Oven** Direct  
**Oven Temp:** 35 °C (hold 1 min) to 230 °C at 11 °C/min  
**Carrier Gas** He, constant flow  
**Flow Rate:** 2.0 mL/min  
**Linear Velocity:** 51 cm/sec @ 35 °C  
**Detector** MS  
**Mode:** Scan  
**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  
**Scan Range:** 35 - 250 amu  
**Scan Rate:** 3.32 scans/sec  
**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.:** 20 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