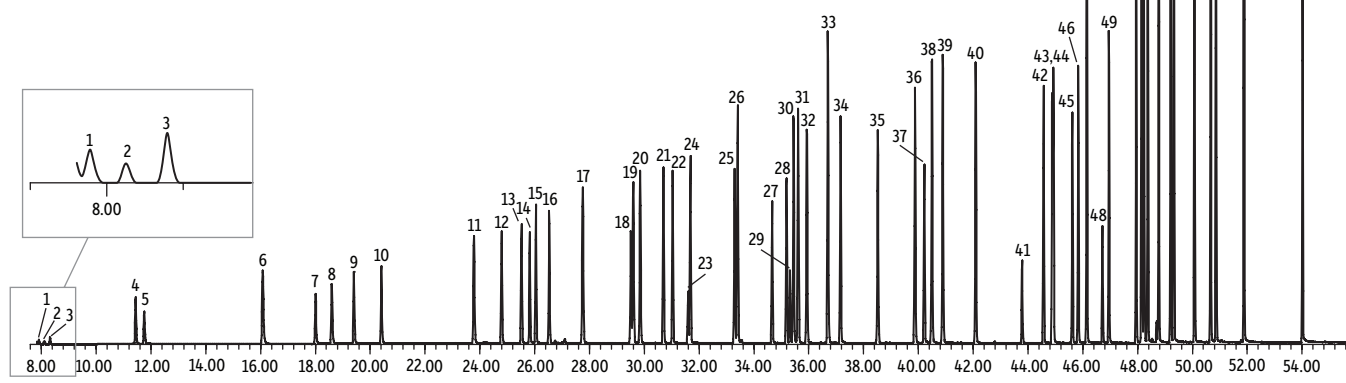


# PAMS 57 Component Mix on Rtx®-1 (105 m)

Peaks	tr (min)	Peaks	tr (min)	Peaks	tr (min)
1. Ethylene	7.91	24. n-Hexane	31.69	47. n-Nonane	46.14
2. Acetylene	8.10	25. Methylcyclopentane	33.30	48. 4-Bromofluorobenzene*	46.71
3. Ethane	8.32	26. 2,4-Dimethylpentane	33.41	49. Isopropylbenzene	46.96
4. Propylene	11.44	27. Benzene	34.67	50. n-Propylbenzene	47.95
5. Propane	11.76	28. Cyclohexane	35.19	51. m-Ethyltoluene	48.15
6. Isobutane	16.08	29. 1,4-Difluorobenzene (IS)	35.32	52. p-Ethyltoluene	48.23
7. 1-Butene	18.01	30. 2-Methylhexane	35.44	53. 1,3,5-Trimethylbenzene	48.38
8. n-Butane	18.60	31. 2,3-Dimethylpentane	35.62	54. o-Ethyltoluene	48.77
9. trans-2-Butene	19.41	32. 3-Methylhexane	35.93	55. n-Decane	49.32
10. cis-2-Butene	20.41	33. 2,2,4-Trimethylpentane	36.70	56. 1,2,4-Trimethylbenzene	49.21
11. iso-Pentane	23.79	34. n-Heptane	37.17	57. 1,2,3-Trimethylbenzene	50.07
12. 1-Pentene	24.80	35. Methylcyclohexane	38.52	58. m-Diethylbenzene	50.67
13. n-Pentane	25.53	36. 2,3,4-Trimethylpentane	39.88	59. p-Diethylbenzene	50.87
14. Isoprene	25.83	37. Toluene	40.22	60. Undecane	51.89
15. trans-2-Pentene	26.05	38. 2-Methylheptane	40.49	61. Dodecane	54.02
16. cis-2-Pentene	26.54	39. 3-Methylheptane	40.89		
17. 2,2-Dimethylbutane	27.76	40. n-Octane	42.09		
18. Cyclopentane	29.50	41. Chlorobenzene-d5 (IS)	43.79		
19. 2,3-Dimethylbutane	29.60	42. Ethylbenzene	44.57		
20. 2-Methylpentane	29.86	43. m-Xylene	44.89		
21. 3-Methylpentane	30.70	44. p-Xylene	44.93		
22. 1-Hexene	31.04	45. Styrene	45.62		
23. Bromochloromethane (IS)	31.60	46. o-Xylene	45.83		



GC\_AR1160

**Column** Rtx®-1, 105 m, 0.25 mm ID, 1.00 µm (cat.# 10159)  
with MXT®-Union connector kit (cat.# 21386)

**Sample** Ozone precursor mixture/PAMS (cat.# 34420)  
TO-14A internal standard/tuning mix (cat.# 34408)

**Diluent:** Nitrogen  
**Conc.:** 10 ppbv 400 mL injection

**Injection** Direct

**Oven**  
Oven Temp.: -45 °C (hold 4 min) to 125 °C at 4.50 °C/min to 250 °C at 9.00 °C/min

**Carrier Gas** He, constant flow  
Flow Rate: 2.0 mL/min  
Linear Velocity: 26 cm/sec @ -45 °C

**Detector** MS  
Mode: Scan  
Scan Program:

Group	Start Time (min)	Scan Range (amu)	Scan Rate (scans/sec)
1	7.00	26.00-30.00	5.21
2	10.01	26.00-53.50	2.13
3	18.01	39.00-176.00	1.34

Transfer Line Temp.: 270 °C  
Analyzer Type: Quadrupole  
Source Type: Stainless Steel  
Drawout Plate: 6mm ID  
Source Temp.: 230 °C  
Quad Temp.: 150 °C  
Electron Energy: 70.0 eV  
Solvent Delay Time: 7.00 min  
Tune Type: BFB  
Ionization Mode: EI  
Preconcentrator: Nutech 8900DS

**Trap 1 Settings**  
Type/Sorbent: Siltek®-treated glass beads  
Cooling temp: -180 °C

Preheat temp: 5 °C  
Preheat time: 0 sec  
Desorb temp: 20 °C  
Desorb flow: 5 mL/min  
Desorb time: 120 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® GR  
Cooling temp: -45 °C  
Desorb temp: 200 °C  
Desorb time: 0 sec  
Bakeout temp: 175 °C  
Bakeout time: 30 sec

**Cryofocuser**  
Cooling temp: -180 °C  
Inject time: 30 sec

**Internal Standard**  
Purge flow: 100 mL/min  
Purge time: 6 sec  
Vol.: 100 mL  
ISTD flow: 100 mL/min

**Standard**  
Size: 400 mL  
Purge flow: 100 mL/min  
Purge time: 6 sec  
Sample flow: 100 mL/min

**Instrument** HP6890 GC & 5973 MSD  
**Acknowledgement** Nutech/EST Analytical