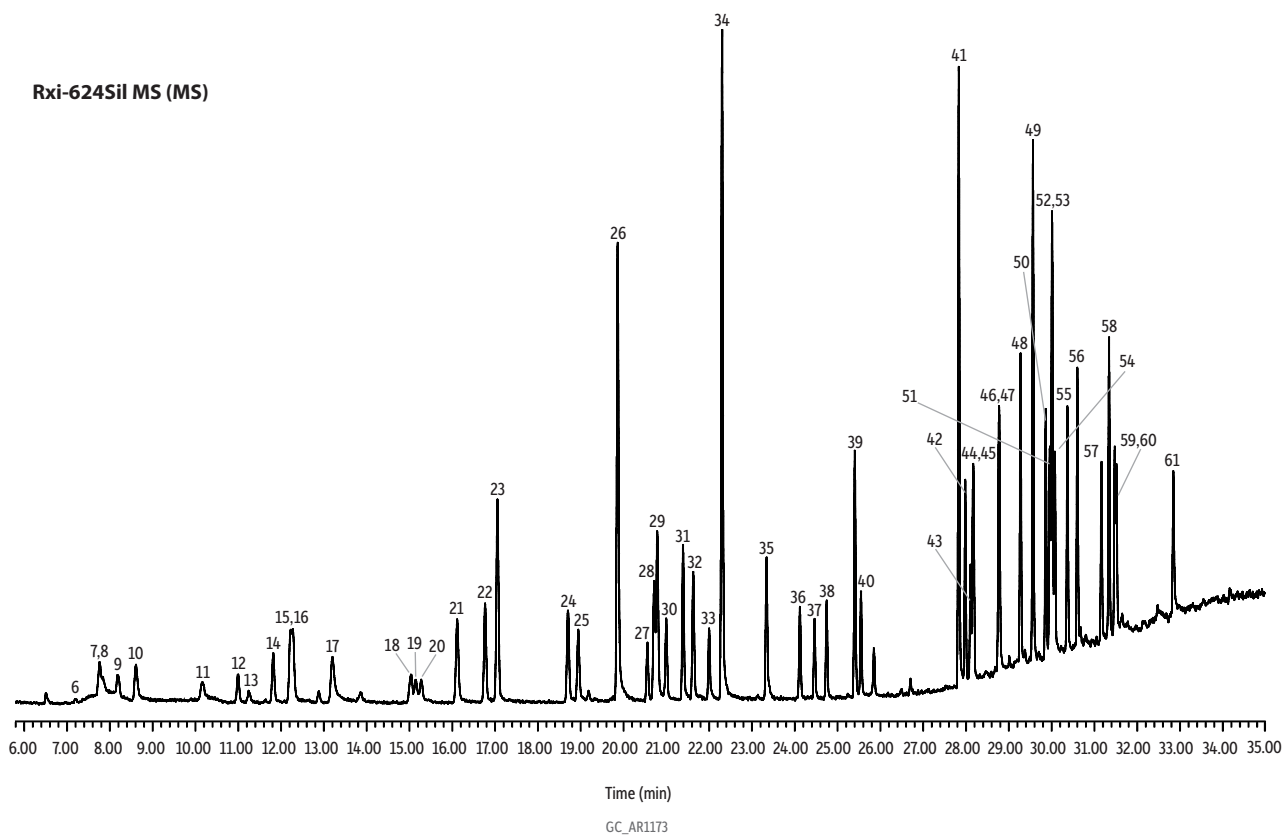
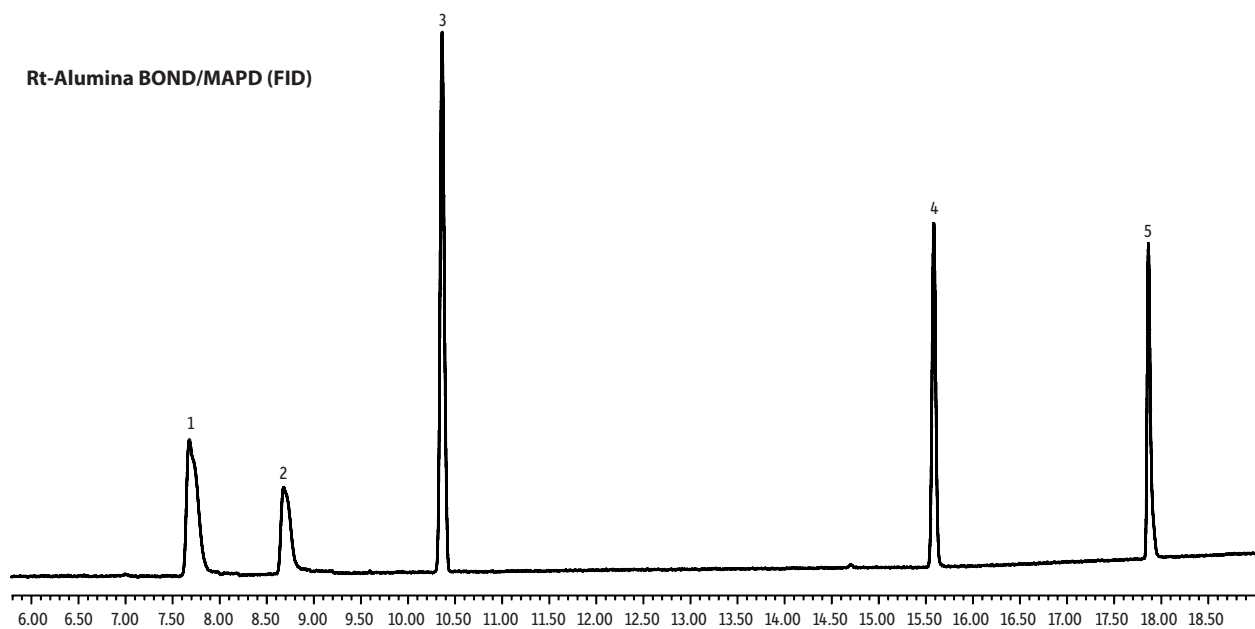


PAMS on Rt-Alumina BOND/MAPD (by FID) and Rxi-624Sil MS (by MS) using Deans Switch

- PAMS analysis in a single run.
- No cryogenic cooling.



Peaks	tr (min)	Peaks	tr (min)
1. Ethane	7.68	31. Benzene	21.39
2. Ethylene	8.68	32. 2,2,4-Trimethylpentane	21.63
3. Propane	10.36	33. <i>n</i> -Heptane	22
4. Propylene	15.58	34. 1,4-Difluorobenzene	22.3
5. Acetylene	17.86	35. Methylcyclohexane	23.34
6. Isobutane	7.19	36. 2,3,4-Trimethylpentane	24.12
7. <i>trans</i> -2-Butene	7.84	37. 2-Methylheptane	24.46
8. <i>n</i> -Butane	7.94	38. 3-Methylheptane	24.75
9. <i>cis</i> -2-Butene	8.19	39. Toluene	25.41
10. 1-Butene	8.61	40. <i>n</i> -Octane	25.55
11. Isopentane	10.16	41. Chlorobenzene-d5	27.83
12. 1-Pentene	10.99	42. Ethylbenzene	27.98
13. <i>n</i> -Pentane	11.25	43. <i>n</i> -Nonane	28.11
14. <i>trans</i> -2-Pentene	11.82	44. <i>m</i> -Xylene	28.17
15. Isoprene	12.22	45. <i>p</i> -Xylene	28.17
16. <i>cis</i> -2-Pentene	12.28	46. <i>o</i> -Xylene	28.76
17. 2,2-Dimethylbutane	13.19	47. Styrene	28.78
18. 2,3-Dimethylbutane	15.03	48. Isopropylbenzene	29.28
19. 2-Methylpentane	15.15	49. 4-Bromofluorobenzene	29.56
20. Cyclopentane	15.28	50. <i>n</i> -Propylbenzene	29.86
21. 3-Methylpentane	16.16	51. 1,2,3-Trimethylbenzene	29.96
22. 1-Hexene	16.76	52. <i>n</i> -Decane	30
23. <i>n</i> -Hexane	17.05	53. <i>p</i> -Ethyltoluene	30.01
24. 2,4-Dimethylpentane	18.7	54. 1,3,5-Trimethylbenzene	30.08
25. Methylcyclopentane	18.94	55. <i>m</i> -Ethyltoluene	30.37
26. Bromochloromethane	19.86	56. 1,2,4-Trimethylbenzene	30.6
27. 2-Methylhexane	20.56	57. <i>o</i> -Ethyltoluene	31.16
28. Cyclohexane	20.71	58. <i>m</i> -Diethylbenzene	31.34
29. 2,3-Dimethylpentane	20.79	59. <i>p</i> -Diethylbenzene	31.48
30. 3-Methylhexane	21	60. <i>n</i> -Undecane	31.52
		61. <i>n</i> -Dodecane	32.84

Column Rxi-624Sil MS, 60 m, 0.25 mm ID, 1.40 µm (cat.# 13869) with zero dead volume Valco internal union (cat.# 20150)
Ozone precursor/PAMS mix (cat.# 26370)

Sample Diluent: Air
Conc.: 10 ppbv
Injection on-column
Oven Oven Temp.: 35 °C (hold 7 min) to 60 °C at 3 °C/min to 170 °C at 10 °C/min to 250 °C at 30 °C/min (hold 6 min)
Carrier Gas He, constant flow
Flow Rate: 2.0 mL/min
Detector MS
Mode: Scan

Group	Start Time (min)	Scan Range (amu)	Scan Rate (scans/sec)
1	5.7	29-226	3.7

Transfer Line Temp.: 250 °C
Analyzer Type: Quadrupole
Source Type: Extractor
Source Temp.: 230 °C
Quad Temp.: 150 °C
Electron Energy: 70 eV
Solvent Delay Time: 5.7 min
Tune Type: BFB
Ionization Mode: EI
Preconcentrator Markes Unity 2 + CIA
Trap 1 Settings
Cooling temp.: 5 °C
Desorb temp.: 300 °C
Desorb flow: 6 mL/min
Desorb time: 180 sec
Internal Standard
Purge flow: 50 mL/min
Purge time: 60 sec
Vol.: 50 mL
ISTD flow: 50 mL/min
Standard
Size: 400 mL
Purge flow: 50 mL/min
Purge time: 60 sec
Sample flow: 100 mL/min
Instrument Agilent 7890B GC & 5977A MSD
Notes Deans switch time: 6.489 min
Primary column to Deans switch: Rxi-624Sil MS 60 m x 0.25 mm x 1.40 µm (cat.# 13869), 2 mL/min He
Secondary column to FID: Rt-Alumina BOND/MAPD 30 m x 0.25 mm x 4 µm (cat.# 19781), 3 mL/min He
Transfer line to MS: intermediate-polarity deactivated 1 m x 0.1 mm (cat.# 10100), 3 mL/min He

FID Parameters
Temp.: 250 °C
Hz flow: 30 mL/min
Air flow: 400 mL/min
Makeup (N₂) flow: 22 mL/min
Q a12 weData rate: 5Hz