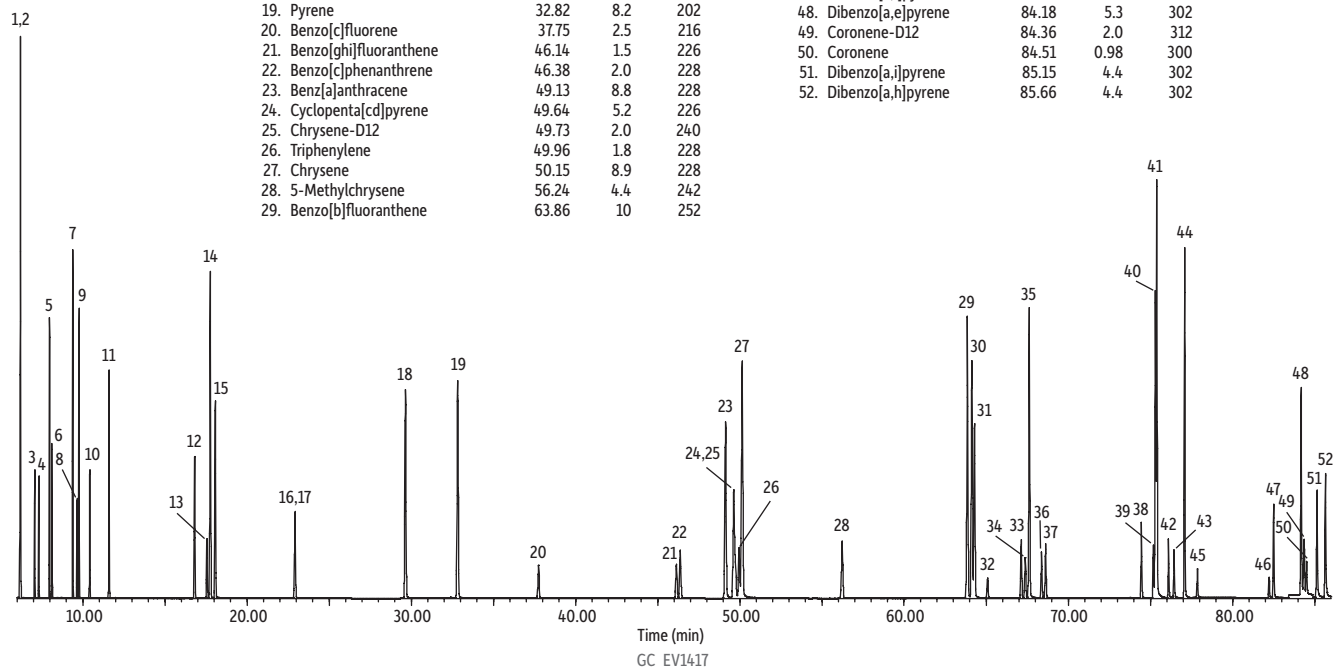


Select PAHs on Rxi®-PAH (60 m x 0.25 mm x 0.10 µm)

| Peaks | t _R (min) | Conc. (µg/mL) | Quant Ion | Peaks | t _R (min) | Conc. (µg/mL) | Quant Ion |
|------------------------------------|----------------------|---------------|-----------|------------------------------|----------------------|---------------|-----------|
| 1. Naphthalene-D8 | 6.17 | 2.0 | 128 | 30. Benzo[k]fluoranthene | 64.13 | 8.3 | 252 |
| 2. Naphthalene | 6.21 | 9.3 | 136 | 31. Benzo[j]fluoranthene | 64.29 | 6.1 | 252 |
| 3. 2-Methylnaphthalene | 7.08 | 2.5 | 142 | 32. Benzo[a]fluoranthene | 65.10 | 0.99 | 252 |
| 4. 1-Methylnaphthalene | 7.32 | 2.5 | 142 | 33. Benzo[e]pyrene | 67.15 | 2.0 | 252 |
| 5. Biphenyl | 7.97 | 4.9 | 154 | 34. Benzo[a]pyrene-D12 | 67.38 | 2.0 | 264 |
| 6. 2,6-Dimethylnaphthalene | 8.12 | 2.5 | 156 | 35. Benzo[a]pyrene | 67.63 | 8.9 | 252 |
| 7. Acenaphthylene | 9.39 | 7.1 | 162 | 36. Perylene-D12 | 68.38 | 2.0 | 264 |
| 8. Acenaphthene-D10 | 9.65 | 2.0 | 152 | 37. Perylene | 68.62 | 1.9 | 252 |
| 9. Acenaphthene | 9.77 | 6.8 | 153 | 38. Dibenzo[a,j]anthracene | 74.46 | 2.0 | 278 |
| 10. 2,3,5-Trimethylnaphthalene | 10.42 | 2.5 | 170 | 39. Dibenzo[a,c]anthracene | 75.18 | 1.3 | 278 |
| 11. Fluorene | 11.6 | 6.4 | 165 | 40. Indeno[1,2,3-cd]pyrene | 75.31 | 8.8 | 276 |
| 12. Dibenzothiophene | 16.81 | 4.4 | 184 | 41. Dibenzo[a,h]anthracene | 75.39 | 8.8 | 278 |
| 13. Phenanthrene-D10 | 17.56 | 2.0 | 188 | 42. Benzo[b]chrysene | 76.11 | 1.8 | 278 |
| 14. Phenanthrene | 17.76 | 9.4 | 178 | 43. Picene | 76.45 | 1.4 | 278 |
| 15. Anthracene | 18.07 | 6.0 | 178 | 44. Benzo[ghi]perylene | 77.08 | 9.3 | 276 |
| 16. 4H-Cyclopenta[def]phenanthrene | 22.93 | 1.0 | 190 | 45. Anthanthrene | 77.87 | 0.95 | 276 |
| 17. 1-Methylphenanthrene | 22.93 | 2.5 | 192 | 46. Dibenzo[b,k]fluoranthene | 82.23 | 0.71 | 302 |
| 18. Fluoranthene | 29.64 | 8.0 | 202 | 47. Dibenzo[a,l]pyrene | 82.51 | 4.4 | 302 |
| 19. Pyrene | 32.82 | 8.2 | 202 | 48. Dibenzo[a,e]pyrene | 84.18 | 5.3 | 302 |
| 20. Benzo[c]fluorene | 37.75 | 2.5 | 216 | 49. Coronene-D12 | 84.36 | 2.0 | 312 |
| 21. Benzo[ghi]fluoranthene | 46.14 | 1.5 | 226 | 50. Coronene | 84.51 | 0.98 | 300 |
| 22. Benzo[c]phenanthrene | 46.38 | 2.0 | 228 | 51. Dibenzo[a,i]pyrene | 85.15 | 4.4 | 302 |
| 23. Benz[a]anthracene | 49.13 | 8.8 | 228 | 52. Dibenzo[a,h]pyrene | 85.66 | 4.4 | 302 |
| 24. Cyclopenta[cd]pyrene | 49.64 | 5.2 | 226 | | | | |
| 25. Chrysene-D12 | 49.73 | 2.0 | 240 | | | | |
| 26. Triphenylene | 49.96 | 1.8 | 228 | | | | |
| 27. Chrysene | 50.15 | 8.9 | 228 | | | | |
| 28. 5-Methylchrysene | 56.24 | 4.4 | 242 | | | | |
| 29. Benzo[b]fluoranthene | 63.86 | 10 | 252 | | | | |



Column Rxi®-PAH, 60 m, 0.25 mm ID, 0.10 µm (cat.# 49317)
Sample SV internal standard mix (cat.# 31206)
 Coronene-D12 (CIL) (cat.# DLM-2715)
 Benzo[a]pyrene-D12 (CIL) (cat.# DLM-258-0)
 Aromatics in toluene (NIST) (cat.# 2260a)
 Native PAH stock (Wellington Labs) (cat.# PAH-STK-A)
 EU 15+1 PAH standard (cat.# 32470)
 Custom PAH SIM standard (cat.# 557484)

Diluent: Toluene

Conc.: 0.71 to 10 µg/mL

Injection

Inj. Vol.: 1 µL split (split ratio 10:1)

Liner: Premium 4 mm Precision® liner w/wool (cat.# 23305.1)

Inj. Temp.: 275 °C

Oven

Oven Temp.: 110 °C (hold 1.6 min) to 175 °C at 30 °C/min to 265 °C at 1.6 °C/min to 350 °C at 4 °C/min (hold 15 min)

Carrier Gas

Flow Rate: He, constant flow

Detector MS

Mode: SIM

Transfer Line

Temp.: 320 °C

Analyzer Type: Quadrupole

Source Type: Extractor

Extractor Lens: 9 mm ID

Source Temp.: 350 °C

Quad Temp.: 200 °C

Solvent Delay

Time: 3 min

Ionization Mode: EI

Instrument Agilent 7890B GC & 5977A MSD

Notes Conditions optimized using EZGC® software produce good separation of dibenzo[a,c]anthracene and dibenzo[a,h]anthracene from indeno[1,2,3-cd]pyrene, triphenylene from chrysene, as well as the benzo[a]fluoranthene isomers.

| Group | Start Time (min) | Ion(s) (m/z) | Dwell (ms) |
|-------|------------------|--|------------|
| 1 | 5.09 | 102.1, 108.1, 128.1, 136.2 | 20 |
| 2 | 6.68 | 115.1, 142.1 | 20 |
| 3 | 7.55 | 76.1, 141.1, 154.1, 156.2 | 20 |
| 4 | 8.77 | 75.6, 152.1 | 20 |
| 5 | 9.56 | 76.1, 153.1, 162.2, 164.2 | 20 |
| 6 | 10.26 | 155.1, 170.2 | 20 |
| 7 | 11.12 | 82.4, 165.1 | 20 |
| 8 | 14.27 | 139.1, 184.1 | 20 |
| 9 | 17.26 | 152.1, 160.2, 178.1, 188.2 | 20 |
| 10 | 20.58 | 94.6, 165.1, 190.1, 192.1 | 20 |
| 11 | 26.32 | 101.1, 202.1 | 20 |
| 12 | 34.97 | 92.1, 184.1 | 20 |
| 13 | 37.36 | 108.0, 216.0 | 20 |
| 14 | 41.78 | 196.1, 212.2 | 20 |
| 15 | 45.86 | 113.1, 226.1, 228.1 | 20 |
| 16 | 47.86 | 114.0, 228.1 | 20 |
| 17 | 49.49 | 113.1, 120.1, 226.1, 228.1, 240.1 | 20 |
| 18 | 51.24 | 154.1, 252.1 | 20 |
| 19 | 54.16 | 119.8, 242.2 | 20 |
| 20 | 60.13 | 125.1, 126.1, 252.1 | 20 |
| 21 | 64.77 | 126.1, 252.1 | 20 |
| 22 | 66.15 | 125.1, 126.1, 132.1, 252.1, 264.1 | 20 |
| 23 | 68.07 | 125.0, 132.2, 252.1, 264.1 | 20 |
| 24 | 69.10 | 252.1, 268.1 | 20 |
| 25 | 71.92 | 139.1, 139.5, 278.1, 279.1 | 20 |
| 26 | 74.87 | 138.1, 139.1, 276.1, 278.1 | 20 |
| 27 | 75.81 | 138.1, 139.1, 278.1 | 20 |
| 28 | 76.82 | 138.1, 276.1 | 20 |
| 29 | 77.53 | 132.6, 138.1, 267.1, 276.1 | 20 |
| 30 | 80.20 | 151.0, 302.1 | 20 |
| 31 | 83.40 | 150.0, 151.0, 156.1, 300.1, 302.1, 312.1 | 20 |
| 32 | 84.88 | 151.0, 302.1 | 20 |