

# Select Polycyclic Aromatic Hydrocarbons (PAHs) on Rxi®-PAH (30 m x 0.25 mm ID x 0.10 µm df)

Peaks	Conc. (µg/mL)
1. Naphthalene	1.0
2. 2-Methylnaphthalene	0.80
3. 1-Methylnaphthalene	0.80
4. 2,6-Dimethylnaphthalene	0.80
5. Acenaphthylene	1.0
6. Acenaphthene-d10	20
7. Acenaphthene	1.0
8. 2,3,5-Trimethylnaphthalene	0.80
9. Fluorene	1.0
10. Dibenzothiophene	0.80
11. Phenanthrene-d10	20
12. Phenanthrene	1.0
13. Anthracene	1.0
14. 1-Methylphenanthrene	0.80
15. Fluoranthene	1.0
16. Pyrene	1.0
17. Benzidine	1.0
18. 3,3'-Dimethylbenzidine	1.0
19. Benz[a]anthracene	1.0
20. Chrysene-d12	20
21. Cyclopenta[cd]pyrene	0.20
22. Triphenylene	1.0
23. Chrysene	1.0
24. 3,3'-Dichlorobenzidine	1.0
25. 5-Methylchrysene	0.20
26. Benzo[b]fluoranthene	1.0
27. Benzo[k]fluoranthene	1.0
28. Benzo[j]fluoranthene	1.0
29. Benzo[a]pyrene-d12	1.0
30. Benzo[a]pyrene	1.0
31. 3-Methylcholanthrene	0.80
32. Dibenzo[a,h]acridine	0.80
33. Dibenzo[a,j]acridine	0.80
34. Indeno[1,2,3-cd]pyrene	1.0
35. Dibenzo[a,h]anthracene	1.0
36. Benzo[ghi]perylene	1.0
37. 7H-Dibenzo[c,g]carbazole	0.80
38. Dibenzo[a,l]pyrene	0.20
39. Dibenzo[a,e]pyrene	1.0
40. Dibenzo[a,i]pyrene	1.0
41. Dibenzo[a,h]pyrene	1.0

**Column Sample**  
 Rxi®-PAH, 30 m, 0.25 mm ID, 0.10 µm (cat.# 49318)  
 Method 525.2 internal standard mix (cat.# 31825)  
 Triphenylene (CS S-13711U1)  
 Benzo[a]pyrene-d12 (CIL DLM-258-0)  
 Custom PAH SIM spike mix (cat.# 557484)  
 PAH native stock solution (Wellington PAH-STK-A)  
 PAH supplement mix for Method 8100 (cat.# 31857)  
 Dichloromethane

**Diluent:**  
**Injection**  
 Inj. Vol.: 0.5 µL split (split ratio 10:1)  
 Liner: 2 mm Precision® liner w/deactivated wool (cat.# 20823)  
 Inj. Temp.: 275 °C

**Oven**  
 Oven Temp.: 110 °C (hold 0.57 min) to 175 °C at 65 °C/min to 210 °C at 45 °C/min to 295 °C at 5.3 °C/min to 350 °C at 35 °C/min (hold 5 min)

**Carrier Gas**  
 He, constant flow  
 Flow Rate: 2 mL/min

**Detector**  
 MS  
 Mode: SIM  
 Transfer Line  
 Temp.: 330 °C  
 Analyzer Type: Quadrupole  
 Source Type: Extractor  
 Extractor Lens: 9 mm ID  
 Source Temp.: 350 °C  
 Quad Temp.: 200 °C  
 Solvent Delay  
 Time: 1.05 min  
 Tune Type: DFTPP

**Instrument Notes**  
 Agilent 7890B GC & 5977A MSD  
 Performs the separation of two critical sets of isobars:  
 1. Cyclopenta[cd]pyrene, triphenylene, and chrysene  
 2. Benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[j]fluoranthene

Scan Program:

Group	Start Time (min)	Ion(s) (m/z)	Dwell (ms)
1	1.05	102, 128	25
2	2.08	115, 141, 142, 156	25
3	2.58	75.9, 80, 82.3, 152, 153, 154, 155, 162, 165, 170	15
4	3.49	89, 94, 139, 152, 160, 178, 183, 188	15
5	4.41	94.5, 165, 192	25
6	5.35	100.9, 202	25
7	6.87	92, 184	25
8	8.29	106, 212	25
9	9.63	113, 114, 120.1, 226, 228, 240.1	25
10	10.57	154, 251.9	25
11	11.40	119.7, 242	25
12	13.16	124.9, 126, 252	25
13	14.96	112.8, 118, 125.9, 132, 252, 264	25
14	16.09	126.1, 252, 268	25
15	17.82	138, 138.9, 139.2, 276, 278, 279	25
16	19.57	137.9, 267, 276	25
17	20.77	150, 302	25
18	21.57	149.9, 151, 302	25

0.010 to 1.0 ng on column

