

Select Polycyclic Aromatic Hydrocarbons (PAHs) on Rxi-PAH

Peaks	Conc. (µg/mL)	Peaks	Conc. (µg/mL)
1. Naphthalene-d8	2.0	26. Benzo[k]fluoranthene	0.27
2. Naphthalene	0.62	27. Benzo[j]fluoranthene	0.30
3. 2-Methylnaphthalene	0.13	28. Benzo[a]fluoranthene	0.10
4. Biphenyl	0.24	29. Benzo[e]pyrene	0.32
5. Acenaphthylene	0.40	30. Benzo[a]pyrene-d12	2.0
6. Acenaphthene-d10	2.0	31. Benzo[a]pyrene	0.33
7. Acenaphthene	0.37	32. Perylene-d12	2.0
8. Fluorene	0.33	33. Perylene	0.32
9. Dibenzothiophene	0.19	34. Dibenzo[a,j]anthracene	0.20
10. Phenanthrene-d10	2.0	35. Dibenzo[a,c]anthracene	0.13
11. Phenanthrene	0.63	36. Indeno[1,2,3-cd]pyrene	0.32
12. Anthracene	0.29	37. Dibenz[a,h]anthracene	0.32
13. 4H-Cyclopenta[def]phenanthrene	0.10	38. Benzo[b]chrysene	0.18
14. Fluoranthene	0.49	39. Picene	0.14
15. Pyrene	0.51	40. Benzo[ghi]perylene	0.37
16. Benzo[c]fluorene	0.13	41. Anthanthrene	0.10
17. Benzo[ghi]fluoranthene	0.15	42. Dibenzo[b,k]fluoranthene	0.070
18. Benzo[c]phenanthrene	0.20	43. Dibenzo[a,l]pyrene	0.13
19. Benz[a]anthracene	0.32	44. Dibenzo[a,e]pyrene	0.22
20. Chrysene-D12	2.0	45. Coronene-d12	2.0
21. Cyclopenta[cd]pyrene	0.21	46. Coronene	0.10
22. Triphenylene	0.18	47. Dibenzo[a,i]pyrene	0.13
23. Chrysene	0.33	48. Dibenzo[a,h]pyrene	0.13
24. 5-Methylchrysene	0.13		
25. Benzo[b]fluoranthene	0.47		

Scan Program:	Group	Start Time (min)	Ion(s) (m/z)	Dwell (ms)
	1	3.09	102.1, 108.1, 128.1, 136.2	40
	2	5.69	115.1, 142.1	40
	3	6.23	76.1, 141.1, 154.1, 156.2	40
	4	6.95	75.6, 76.1, 91.1, 152.1, 153.1, 155.1, 162.2, 170.2	20
	5	7.93	82.4, 165.1	40
	6	9.19	139.1, 152.1, 160.2, 178.1, 184.1, 188.2	40
	7	11.78	94.6, 165.1, 190.1, 192.1	40
	8	14.19	101.1, 202.1	40
	9	16.60	101.1, 202.1	40
	10	18.49	92.1, 184.1	40
	11	19.58	108, 216	40
	12	22.3	196.1, 212.2	40
	13	24.92	113.1, 226.1, 228.1	40
	14	26.27	113.1, 114.0, 120.1, 226.1, 228.1, 240.1	40
	15	28.75	154.1, 252.1	35
	16	30.62	119.8, 242.2	40
	17	35.29	126.1, 252.1	40
	18	38.56	125.1, 252.1	40
	19	39.23	126.1, 252.1	40
	20	40.71	125.1, 126.1, 132.1, 252.1, 264.1	40
	21	42.91	125, 132.2, 252.1, 264.1	40
	22	44.35	252.1, 268.1	40
	23	48.41	139.1, 139.5, 278.1, 279.1	40
	24	52.13	139.1, 139.5, 278.1, 279.1	40
	25	53.70	138.1, 139.1, 278.1	40
	26	54.97	138.1, 276.1	40
	27	55.92	138.1, 276.1	40
	28	57.04	132.6, 267.1	40
	29	59.69	151.0, 302.1	40
	30	63.27	150, 151, 156.1, 300.1, 302.1, 312.1	40
	31	64.78	151.0, 302.1	40

Column Rxi-PAH, 60 m, 0.25 mm ID, 0.10 µm (cat.# 49317)
Sample SV internal standard mix (cat.# 31206)
 Coronene-d12 (CIL DLM-2715)
 Benzo[a]pyrene-d12 (CIL DLM-258-0)
 Aromatics in toluene (NIST SRM-2260a)
 PAH native stock solution (Wellington PAH-STK-B)
 Dichloromethane

Diluent:
Injection
 Inj. Vol.: 1 µL split (split ratio 10:1)
 Liner: Premium 4 mm Precision liner w/wool (cat.# 23305)
 Inj. Temp.: 275 °C
 Split Vent
 Flow Rate: 19.5 mL/min
Oven
 Oven Temp.: 110 °C (hold 1.6 min) to 210 °C at 24 °C/min to 295 °C at 1.9 °C/min to 350 °C at 3.7 °C/min (hold 6 min)

Carrier Gas He, constant flow
Flow Rate: 1.95 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: 3 min
 Tune Type: DFTPP
Ionization Mode: EI
Instrument Agilent 7890B GC & 5977A MSD
Notes Performs the separation of two critical sets of isobars:
 1. Cyclopenta[c,d]pyrene, triphenylene, and chrysene
 2. Benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[j]fluoranthene

