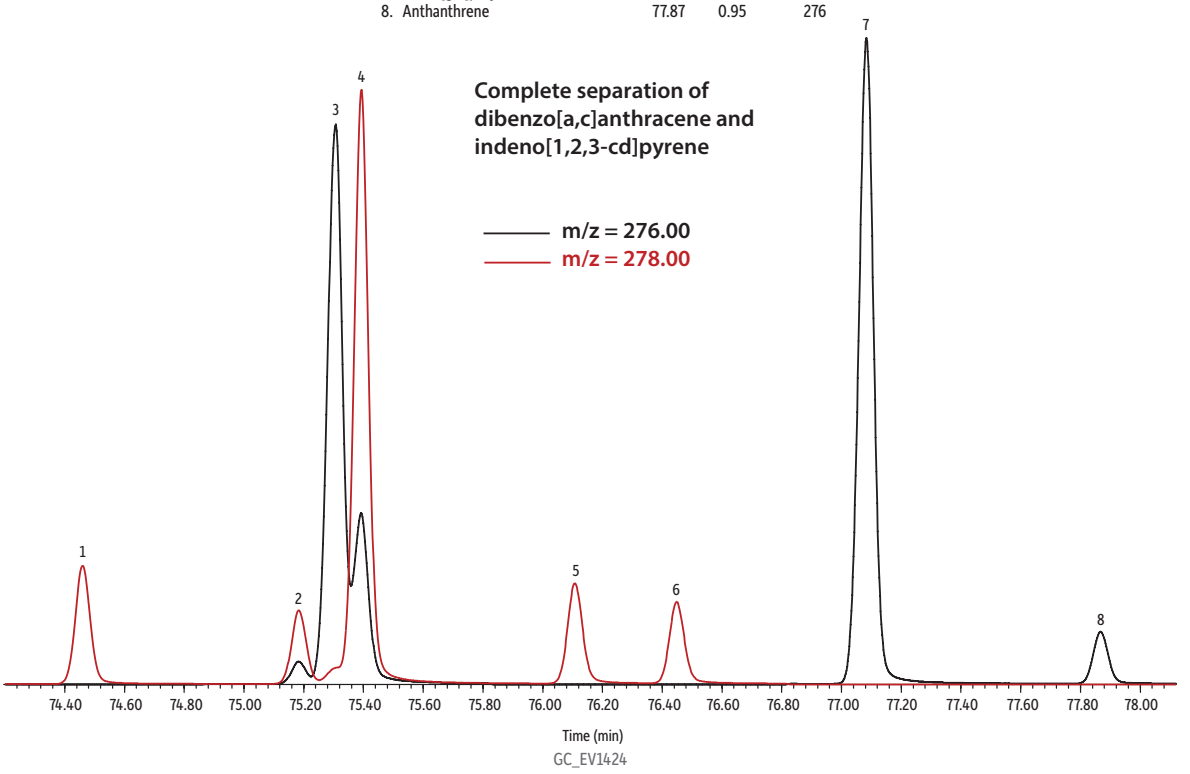
Resolution of Indeno[123-cd]pyrene from Dibenz Anthracene Isomers on Rxi®-PAH (60 m x 0.25 mm x 0.10 µm)

Peaks	t_R (min)	Conc. (µg/mL)	Quant Ion
1. Dibenzo[a,j]anthracene	74.46	2.0	278
2. Dibenzo[a,c]anthracene	75.18	1.3	278
3. Indeno[1,2,3-cd]pyrene	75.31	8.8	276
4. Dibenzo[a,h]anthracene	75.39	8.8	278
5. Benzo[b]chrysene	76.11	1.8	278
6. Picene	76.45	1.4	278
7. Benzo[ghi]perylene	77.08	9.3	276
8. Anthanthrene	77.87	0.95	276



GC_EV1424

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	He, constant flow
Flow Rate:	1.0 mL/min
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 benzofluoranthene 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

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