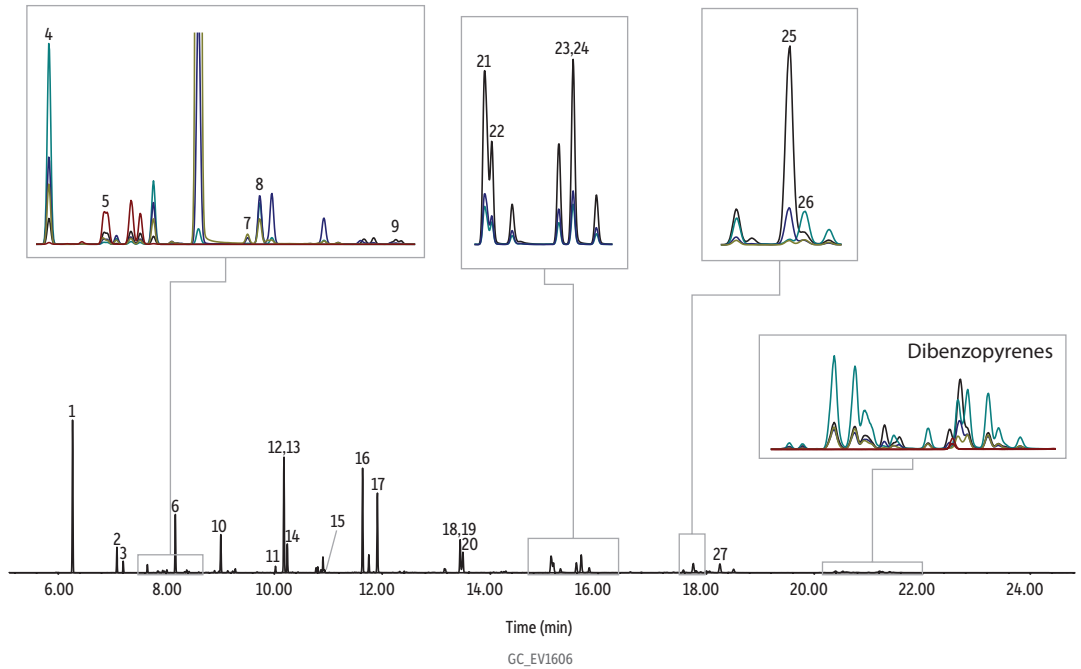


# Complex Mixture of Polycyclic Aromatic Hydrocarbons from Coal Tar on Rxi-SVOCms (SIM)

- Excellent resolution of critical polycyclic aromatic hydrocarbons.



Peaks	tr (min)
1. Naphthalene	6.27
2. 2-Methylnaphthalene	7.09
3. 1-Methylnaphthalene	7.21
4. Biphenyl	7.66
5. 2,6-Dimethylnaphthalene	7.84
6. Acenaphthylene	8.17
7. (1S) Acenaphthene-d10	8.35
8. Acenaphthene	8.39
9. 2,3,5-Trimethylnaphthalene	8.86
10. Fluorene	9.02
11. Dibenzothiophene	10.03
12. (1S) Phenanthrene-D10	10.16
13. Phenanthrene	10.19
14. Anthracene	10.25
15. 1-Methylphenanthrene	10.95
16. Fluoranthene	11.65
17. Pyrene	11.92
18. Benz[a]anthracene	13.46
19. (1S) Chrysene-D12	13.47
20. Chrysene	13.51
21. Benzo[b]fluoranthene*	15.14
22. Benzo[k]fluoranthene	15.19
23. (5S) Benzo[a]pyrene-d12	15.66
24. Benzo[a]pyrene	15.70
25. Indeno[1,2,3-cd]pyrene	17.78
26. Dibenz[a,h]anthracene	17.83
27. Benzo[ghi]perylene	18.27

\* Benzo[b]fluoranthene and benzo[j]fluoranthene coelution.

**Column** Rxi-SVOCms, 30 m, 0.25 mm ID, 0.25 µm (cat.# 16623)  
**Standard/Sample** NIST SRM 1597a - complex mixture of polycyclic aromatic hydrocarbons from coal tar  
**Diluent:** Dichloromethane  
**Injection** 1 µL split (split ratio 20:1)  
**Liner:** Topaz 4.0 mm ID single taper inlet liner with wool (cat.# 23303)  
**Inj. Temp.:** 250 °C  
**Split Vent Flow Rate:** 24 mL/min  
**Oven** 40 °C (hold 0.5 min) to 280 °C at 20 °C/min to 330 °C at 6 °C/min (hold 4 min)  
**Oven Temp.:**  
**Carrier Gas** He, constant flow  
**Flow Rate:** 1.2 mL/min  
**Detector** MS  
**Mode:** SIM  
**SIM Program:**

Group	Start Time (min)	Ion(s) (m/z)	Dwell (ms)
1	5.00	127.05, 128.05, 129.00	10
2	6.75	115.10, 139.00, 141.00, 142.05	10
3	7.47	141.00, 152.00, 153.05, 154.05, 155.05, 156.10, 162.10, 164.10	10
4	8.03	150.00, 151.05, 152.05, 153.05, 154.10, 162.10, 164.10	10
5	8.66	153.05, 155.10, 163.05, 164.10, 165.05, 166.05, 169.10, 170.10	10
6	9.62	139.00, 151.95, 176.10, 177.10, 178.10, 179.10, 183.95, 185.00, 188.10, 189.10	10
7	10.71	189.05, 190.05, 191.10, 192.10	10
8	11.37	200.10, 201.10, 202.10, 203.05	10
9	11.81	200.10, 201.05, 202.05, 203.05	10
10	12.84	114.00, 120.00, 226.10, 227.10, 228.10, 229.10, 240.10	10
11	14.44	126.00, 132.00, 250.10, 252.10, 253.10, 264.00	10
12	15.51	126.00, 132.00, 250.05, 252.05, 253.05, 264.00	10
13	16.95	137.95, 139.00, 274.05, 276.10, 277.10, 278.10, 279.10	10
14	18.10	138.00, 274.05, 276.10, 277.10	10

**Transfer Line Temp.:** 280 °C  
**Analyzer Type:** Quadrupole  
**Source Type:** Extractor  
**Extractor Lens:** 6 mm ID  
**Source Temp.:** 330 °C  
**Quad Temp.:** 150 °C  
**Tune Type:** DFTPP  
**Ionization Mode:** EI  
**Instrument** Agilent 7890B GC & 5977A MSD  
**Sample Preparation** NIST SRM 1597a was diluted 5x in dichloromethane. Isotope-labeled IS/SS are 20 pg on-column. Samples were aliquoted into amber 2 mL, 9 mm short-cap, screw-thread vials (cat.# 21143) containing glass Big Mouth inserts (cat.# 21782) and sealed with 2.0 mL, 9 mm short-cap, screw-vial closures (cat.# 23842). The internal standard and surrogate standard mass on column is 20 pg.  
**Notes**