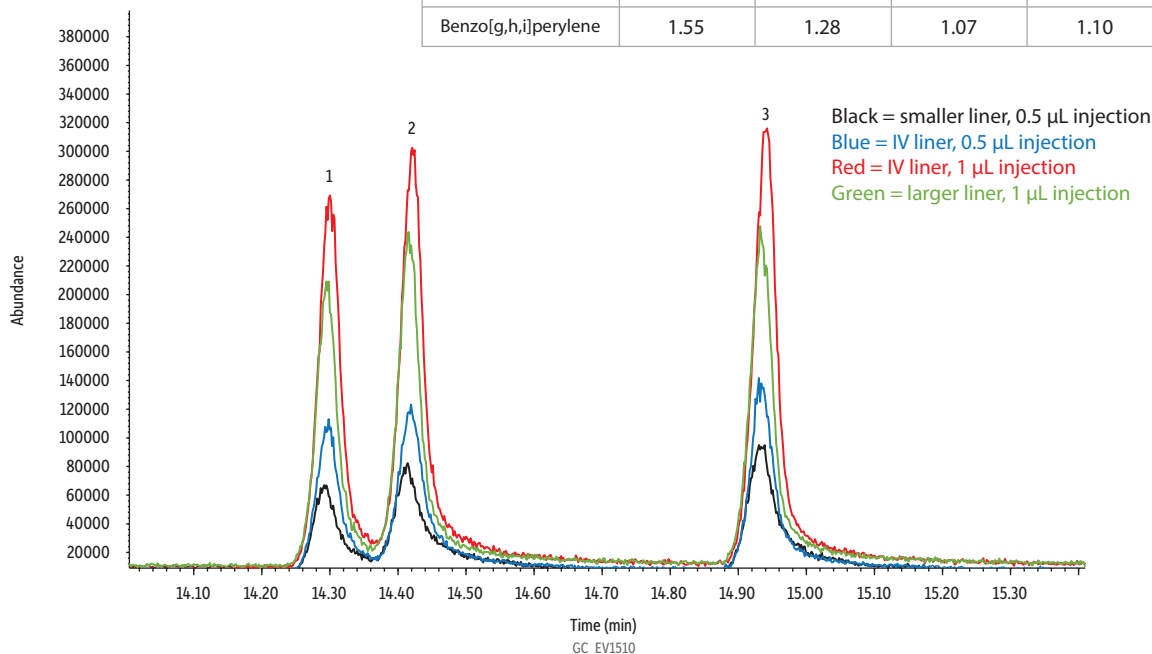


Comparison: Semivolatiles on Narrow-Bore Rxi-SVOCms - IV Liner Article Figure 5

Improved Peak Height and Peak Symmetry of Later Eluting Compounds When Using an IV Liner

Compound	Tailing Factor			
	Smaller vs. IV, 0.5 µL		Larger vs. IV, 1 µL	
	Smaller	IV	IV	Larger
Indeno[1,2,3-cd]pyrene	1.49	1.46	1.08	1.23
Dibenz[a,h]anthracene	1.53	1.29	1.04	1.08
Benzo[g,h,i]perylene	1.55	1.28	1.07	1.10



Peaks	tr (min)	Conc. (µg/mL)
1. Indeno[1,2,3-cd]pyrene	14.3	1
2. Dibenz[a,h]anthracene	14.42	1
3. Benzo[g,h,i]perylene	14.94	1

Column Rxi-SVOCms GC capillary column, 20 m, 0.15 mm ID, 0.15 µm (cat.# 46616)
Standard/Sample Method 525.2 semivolatiles mix (revised), acetone, 1 mL/ampul (cat.# 31899)
 Method 525.2 internal standard mix, 1000 µg/mL, acetone, 1 mL/ampul (cat.# 31825)
 Method 525.2 surrogate standard mix, 1000 µg/mL, acetone, 1 mL/ampul (cat.# 31826)
 Organophosphorus pesticide mix, European formulation, acetone, 1 mL/ampul (cat.# 32418)
 Acetone

Diluent:
Injection
 Inj. Vol.: 0.5-1 µL splitless (hold 3 min)
 Liner: Three Topaz single taper, splitless inlet liners with quartz wool and premium deactivation were compared. All were 78.5 mm long with a 6.5 mm OD and the following IDs: 2.0 mm (cat.# 23316); 3.0 mm (cat.# 27231); and 4.0 mm (cat.# 23303).

Inj. Temp.: 250 °C
 Purge Flow: 15 mL/min

Oven
 Oven Temp.: 45 °C (hold 0.5 min) to 260 °C at 30 °C/min to 330 °C at 4 °C/min

Carrier Gas
 Carrier Gas He, constant flow
 Flow Rate: 0.84 mL/min
 Linear Velocity: 40.807 cm/sec @ 45 °C
 Dead Time: 0.82 min @ 45 °C

Detector
 Mode: MS
 Scan Program: Scan

Group	Start Time (min)	Scan Range (amu)	Scan Rate (scans/sec)
1	1.5	50-550	9.9

Transfer Line Temp.: 250 °C
 Analyzer Type: Quadrupole
 Source Type: Extractor
 Source Temp.: 230 °C
 Quad Temp.: 150 °C
 Electron Energy: 929 eV
 Solvent Delay Time: 1.5 min
 Tune Type: PFTBA
 Ionization Mode: EI
Instrument Agilent 7890A GC & 5975C MSD
Sample Preparation 2 µL of cat.# 31899, 31825, 31826 and 20 µL of cat.# 32418 were added to 1974 µL of acetone. Splitless injections were performed with a 10 µL SGE autosampler syringe (cat.# 24795).