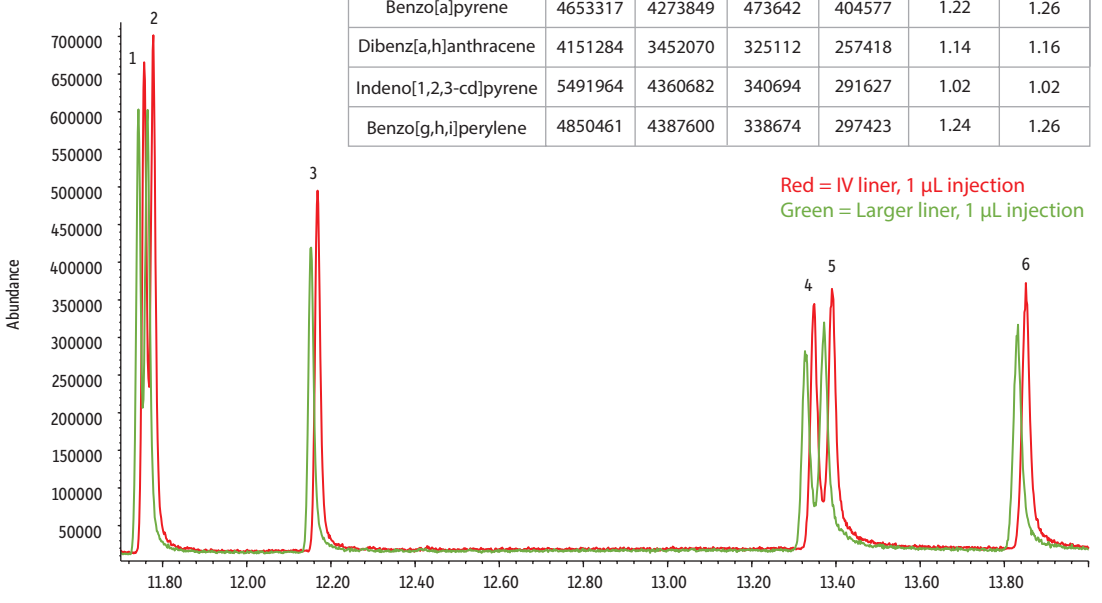
Comparison: PAHs on Narrow-Bore Rxi-PAH - IV Liner Article Figure 7

Improved Peak Height and Peak Symmetry When Using an IV Liner

	Area		Height		Tailing Factor	
Compound	**IV, 1 µL**	**Larger, 1 µL**	**IV, 1 µL**	**Larger, 1 µL**	**IV, 1 µL**	**Larger, 1 µL**
Benzo[b]fluoranthene	5159767	4602203	646587	582105	1.00	1.02
Benzo[k]fluoranthene	6154845	5516070	680185	586397	1.10	0.99
Benzo[a]pyrene	4653317	4273849	473642	404577	1.22	1.26
Dibenz[a,h]anthracene	4151284	3452070	325112	257418	1.14	1.16
Indeno[1,2,3-cd]pyrene	5491964	4360682	340694	291627	1.02	1.02
Benzo[g,h,i]perylene	4850461	4387600	338674	297423	1.24	1.26



Peaks	t_R (min)	Conc. (µg/mL)
1. Benzo[b]fluoranthene 205-99-2	11.76	1
2. Benzo[k]fluoranthene 207-08-9	11.78	1
3. Benzo[a]pyrene 50-32-8	12.17	1
4. Dibenz[a,h]anthracene 53-70-3	13.35	1
5. Indeno[1,2,3-cd]pyrene 193-39-5	13.39	1
6. Benzo[g,h,i]perylene 191-24-2	13.85	1

Column Rxi-PAH GC capillary column, 40 m, 0.18 mm ID, 0.07 µm (cat.# 49316)
Standard/Sample Method 525.2 semivolatile mix (revised), acetone, 1 mL/ampul (cat.# 31899)
EPA Method 525.3 PAH IS mix, 500 µg/mL ea. in acetone, 1 mL/ampul (cat.# 32547)
Diluent: Acetone
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.: 35 °C (hold 0.5 min) to 350 °C at 30 °C/min (hold 4 min)
Carrier Gas He, constant flow
Flow Rate: 1.44 mL/min
Linear Velocity: 37.587 cm/sec @ 35 °C
Dead Time: 1.77 min @ 35 °C
Detector MS
Mode: 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 3 µL of cat.# 31899 and 6 µL of cat.# 32547 were added to 2991 µL of acetone.
Splitless injections were performed with a 10 µL SGE autosampler syringe (cat.# 24795).