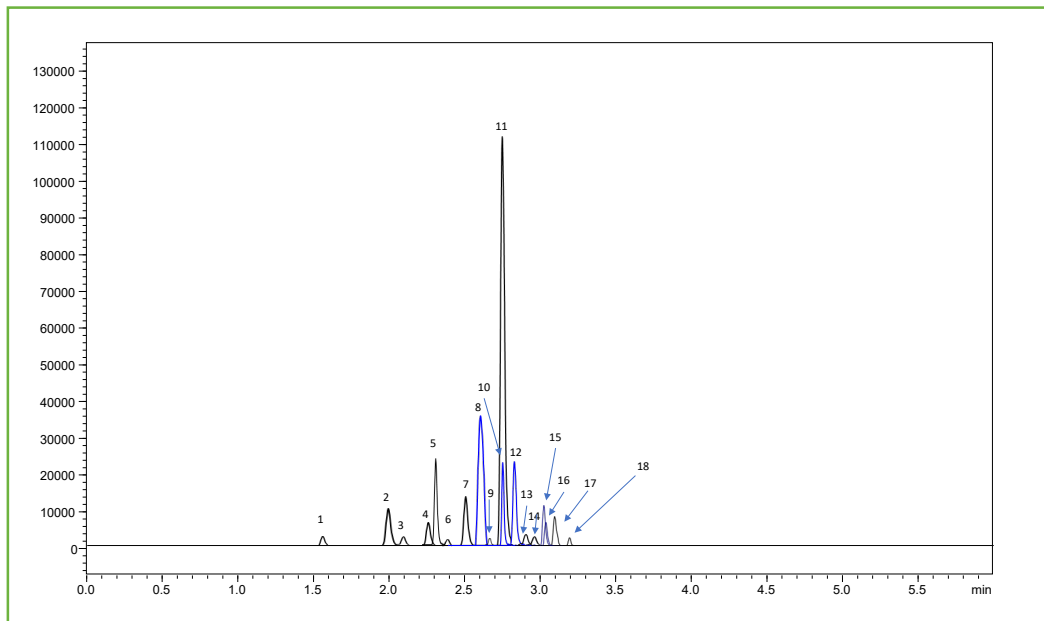




Rapid PFAS Analysis According to EPA 537.1 Using HALO® 90 Å Phenyl-Hexyl, 2.7 µm

Application Note: 219-PF



PEAK IDENTITIES

Peak Number	PFAS Species	Observed Transition	Retention Time
1	PFBS	299.0000>80.0000	2.008
2	PFHxA	313.0000>269.0000	2.325
3	HFPO-DA	285.0000>169.0000	2.339
4	PFHpA	363.0000>319.0000	2.595
5	PFHxS	399.0000>80.0000	2.630
6	ADONA	377.0000>250.9000	2.631
7	PFOA	413.0000>369.0000	2.771
8	PFNA	463.0000>419.0000	2.901
9	PFOS	499.0000>80.0000	2.917
10	9Cl-PF3ONS	530.9000>351.0000	3.009
11	PFDA	513.0000>469.0000	3.011
12	PFUnA	563.0000>519.0000	3.099
13	N-MeFOSAA	570.0000>419.0000	3.106
14	N-EtFOSAA	584.0000>419.0000	3.166
15	11Cl-PF3OUdS	630.7000>451.0000	3.176
16	PFDaA	613.0000>569.0000	3.177
17	PFTriA	663.0000>619.0000	3.244
18	PFTreA	713.0000>669.0000	3.311

As technological advancements continue to progress, mass spectrometers will continue to be improved in regards to the level of sensitivity, mass resolution, and scanning speed. This will undoubtedly change the requirements of EPA 537.1, and column performance must be able to handle these advancements. With this in mind, we developed a method for separation at maximum speed to test the suitability of the column for use in these advanced conditions.

TEST CONDITIONS

Delay Column: HALO 90 Å C-18, 2.7 µm, 2.1 x 50 mm
Part Number: 92812-702
Analytical Column: HALO 90Å Phenyl Hexyl, 2.7 µm, 2.1 x 100 mm
Part Number: 92112-730
Mobile Phase A: H₂O 10mM ammonium formate/
 0.1% formic acid
Mobile Phase B: Methanol
Sample Solvent: (95/5) MeOH/ H₂O
Flow Rate: 0.4 mL/min

Time **%B**
 0.00 30
 3.00 90
 6.00 90
 6.01 30
 9.00 stop
Initial Pressure: 325 bar
Temperature: 40 °C

MS CONDITIONS

Detection: -ESI MS
LC System: Shimadzu Nexera X2 ESI
LCMS system: Shimadzu LCMS-8040
Spray Voltage: -2.0 kV
Nebulizing gas: 2 L/min
Drying gas: 15L/min
DL temp: 250 °C
Heat Block: 400 °C

