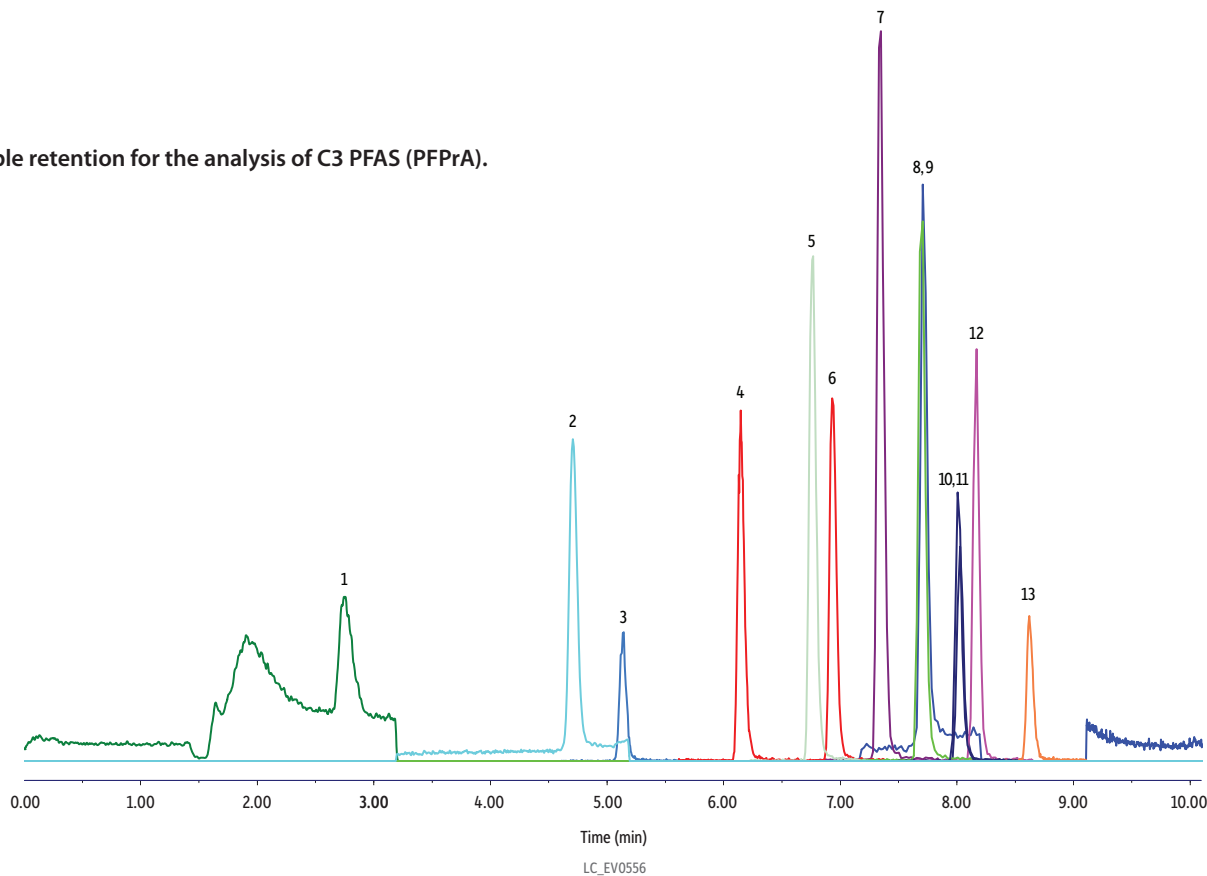


# Ultrashort Chain, Legacy, and Alternative PFAS on Raptor C18 in Ground Water

- Suitable retention for the analysis of C3 PFAS (PFPrA).



Peaks	tr (min)	Conc. (ng/L)	Precursor Ion	Product Ion
1. Perfluoropropanoic acid (PFPrA)	2.75	80	162.9	119.0
2. Perfluorobutanoic acid (PFBA)	4.70	80	212.8	169.0
3. Perfluoropropanesulfonic acid (PFPrS)	5.13	80	248.8	79.6
4. Perfluorobutanesulfonic acid (PFBS)	6.13	80	298.8	79.9
5. Perfluoro- <i>n</i> -[1,2- <sup>13</sup> C <sub>2</sub> ]hexanoic acid ( <sup>13</sup> C <sub>2</sub> -PFHxA)	6.75	50	314.9	270.0
6. Hexafluoropropylene oxide-dimer acid (HFPO-DA)	6.92	80	285.0	168.9
7. Ammonium 4,8-dioxa-3H-perfluorononanoate (ADONA)	7.33	80	376.9	250.7
8. Perfluorooctanoic acid (PFOA)	7.70	80	413.1	368.9
9. Perfluoro-[1,2- <sup>13</sup> C <sub>2</sub> ]octanoic acid ( <sup>13</sup> C <sub>2</sub> -PFOA)	7.70	50	415.0	370.0
10. Perfluorooctanesulfonic acid (PFOS)	8.01	80	498.8	80.0
11. Perfluoro-[1,2,3,4- <sup>13</sup> C <sub>4</sub> ]octanesulfonic acid ( <sup>13</sup> C <sub>4</sub> -PFOS)	8.01	50	503.0	80.0
12. 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonate (9Cl-PF3ONS)	8.15	80	530.8	350.7
13. 11-Chloroheptafluoro-3-oxanonane-1-sulfonate (11Cl-PF3OUdS)	8.61	80	630.7	451.0

**Column** Raptor C18 (cat.# 9304A1E)  
**Dimensions:** 100 mm x 3 mm ID  
**Particle Size:** 2.7 µm  
**Pore Size:** 90 Å  
**Temp.:** 40 °C  
**Standard/Sample**  
**Conc.:** 80 ppt  
**Inj. Vol.:** 10 µL  
**Mobile Phase**  
**A:** Water, 5 mM ammonium acetate  
**B:** Methanol

Time (min)	Flow (mL/min)	%A	%B
0.00	0.25	80	20
7.00	0.25	5	95
9.00	0.25	5	95
9.01	0.25	80	20
11.0	0.25	80	20

**Detector** MS/MS  
**Ion Mode:** ESI-  
**Mode:** MRM  
**Instrument** UHPLC

**Sample Preparation** In a polypropylene vial, 250 µL of groundwater sample (fortified at 80 ppt) was mixed with 250 µL of 40:60 reagent water:methanol and 5 µL of internal standard solution (5 ng/mL of <sup>13</sup>C<sub>2</sub>-PFHxA, <sup>13</sup>C<sub>2</sub>-PFOA, <sup>13</sup>C<sub>4</sub>-PFOS in methanol). The vial was capped with a polyethylene cap prior to analysis.

**Notes** A PFAS delay column (cat.# 27854) was installed between the pump mixer and the injector.