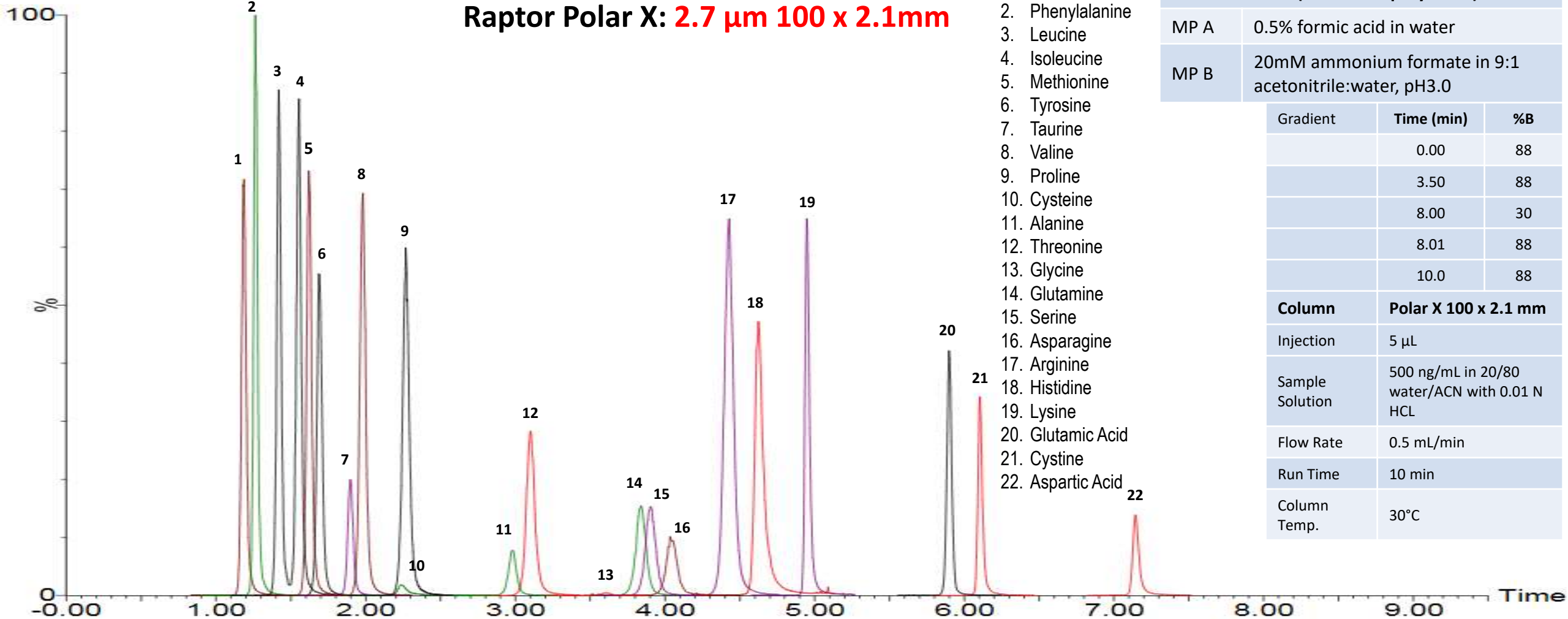


New Method on Raptor Polar X: Underivatized Amino Acids on the Raptor Polar X

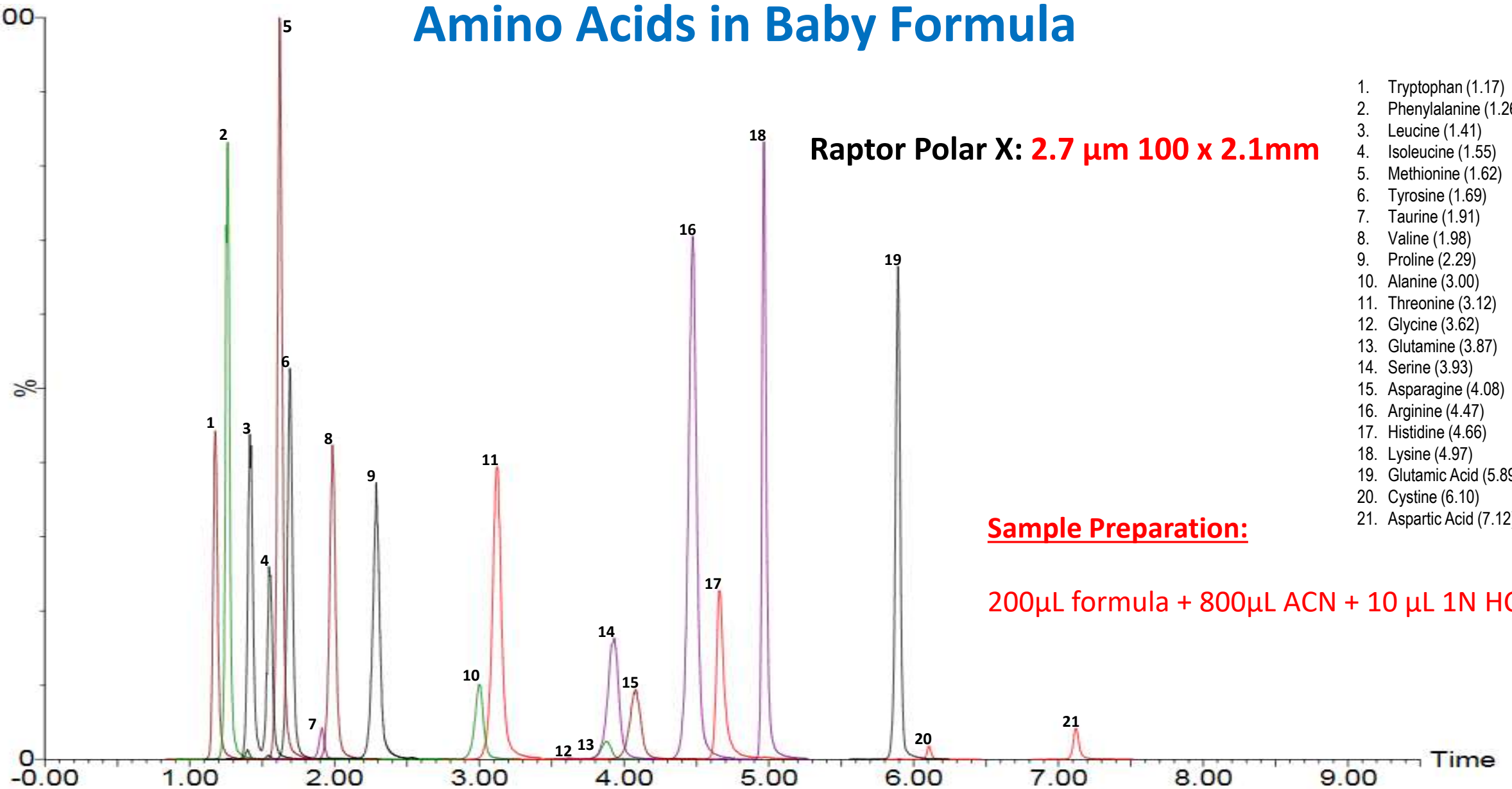
Raptor Polar X: 2.7 μm 100 x 2.1mm

1. Tryptophan
2. Phenylalanine
3. Leucine
4. Isoleucine
5. Methionine
6. Tyrosine
7. Taurine
8. Valine
9. Proline
10. Cysteine
11. Alanine
12. Threonine
13. Glycine
14. Glutamine
15. Serine
16. Asparagine
17. Arginine
18. Histidine
19. Lysine
20. Glutamic Acid
21. Cystine
22. Aspartic Acid

LC Conditions : (Waters Acquity UPLC)		
MP A	0.5% formic acid in water	
MP B	20mM ammonium formate in 9:1 acetonitrile:water, pH3.0	
	Gradient	Time (min)
		0.00
		3.50
		8.00
		8.01
		10.0
	%B	88
	%B	88
	%B	30
	%B	88
	%B	88
	Column	Polar X 100 x 2.1 mm
	Injection	5 μL
	Sample Solution	500 ng/mL in 20/80 water/ACN with 0.01 N HCL
	Flow Rate	0.5 mL/min
	Run Time	10 min
	Column Temp.	30°C

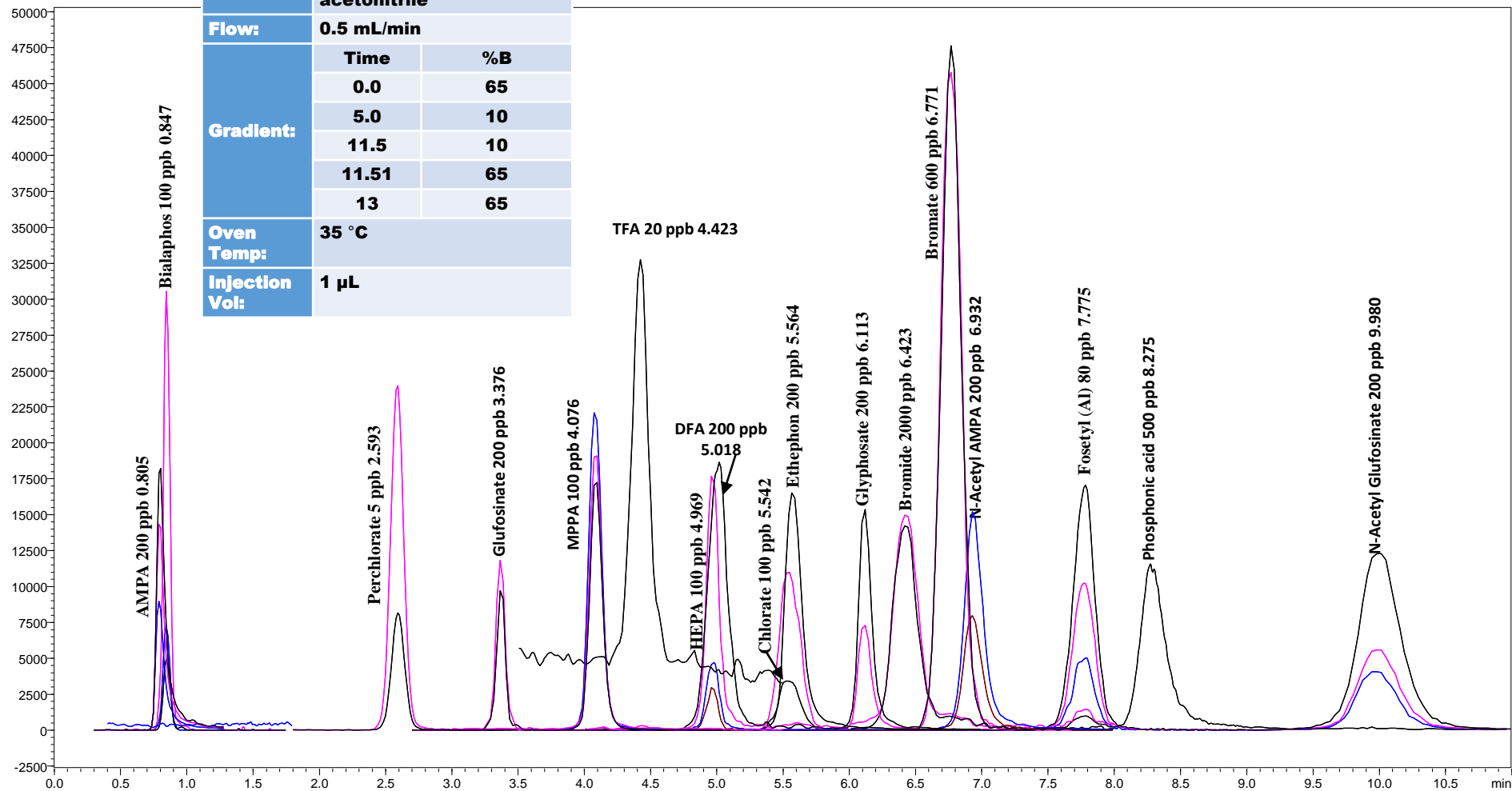


Amino Acids in Baby Formula



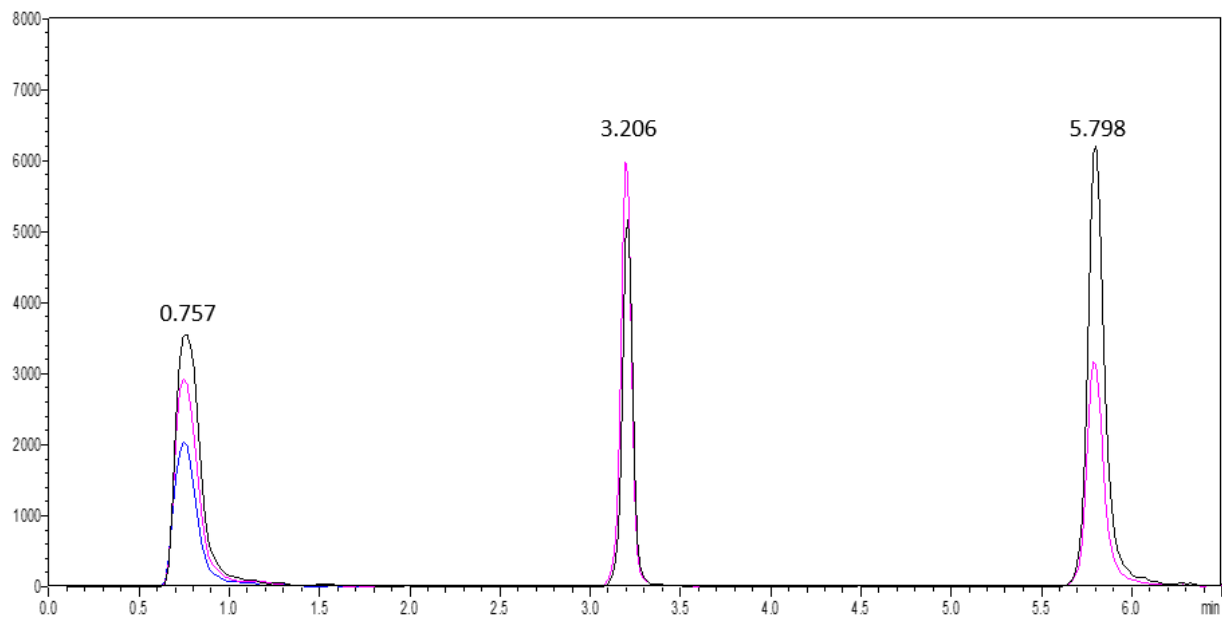
17 Polar Pesticides on Polar X [2.7 μ m, 30 x 2.1mm]

Method Conditions:		
MPA:	0.5% formic acid in water	
MPB:	0.5% formic acid in acetonitrile	
Flow:	0.5 mL/min	
Gradient:	Time	%B
	0.0	65
	5.0	10
	11.51	65
	13	65
Oven Temp:	35 °C	
Injection Vol:	1 μ L	



Glyphosate, Glufosinate & AMPA on Raptor Polar X [2.7 μ m, 30 x 2.1mm]

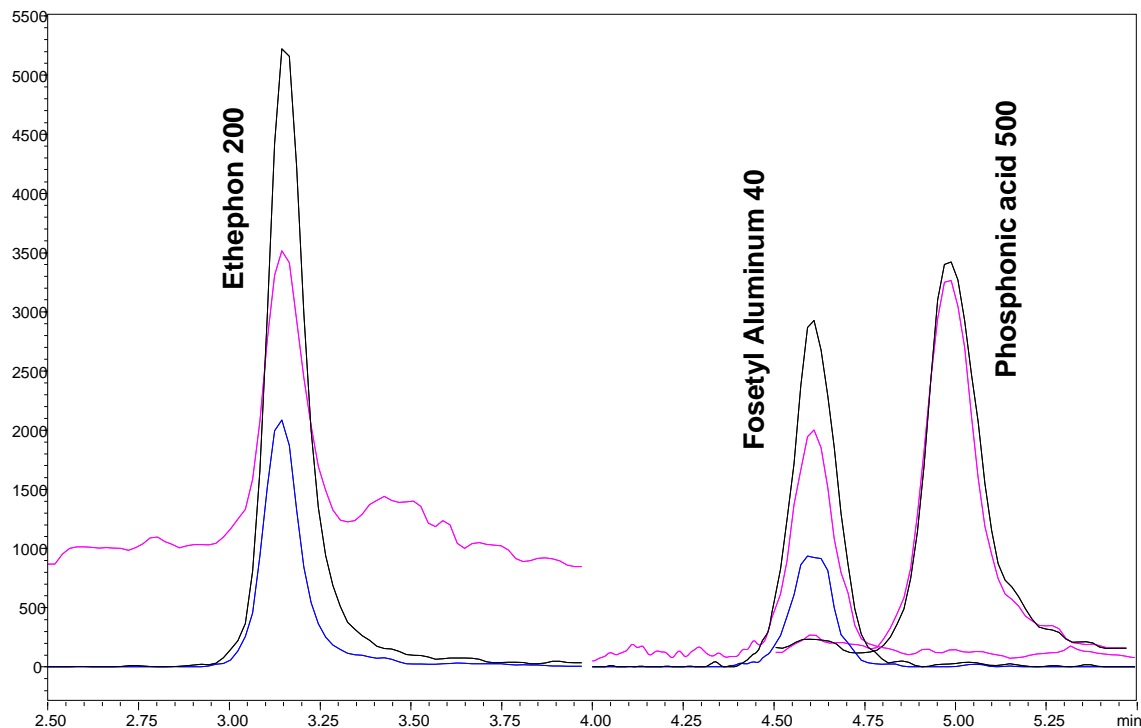
Method Conditions:		
MPA:	0.5% formic acid in water	
MPB:	0.5% formic acid in acetonitrile	
Flow:	0.5 mL/min	
Gradient:	Time	%B
	0.0	65
	5.0	10
	6.5	10
	8.0	65
Oven Temp:	35 °C	
Injection Vol:	5 μ L	



Peaks	t _R (min)	Conc. (ng/mL)	Precursor Ion	Product Ion 1	Product Ion 2	Product Ion 3	Detector	MS/MS
1. AMPA	0.757	100	110.10	79.05	63.10	81.10	Ion Mode:	ESI-
2. Glufosinate	3.206	100	180.20	85.15	95.10		Mode:	MRM
3. Glyphosate	5.798	100	168.10	63.05	79.05		Instrument	UHPLC

Fast Analysis of Phosphonic Acid

Polar X Column (2.7 μ m, 30 x 2.1 mm)



Method Conditions:		
MPA:	0.5% formic acid in water	
MPB:	0.5% formic acid in acetonitrile	
Flow:	0.7 mL/min	
Gradient:	Time	%B
	0.0	40
	3.0	10
	5.5	10
	5.51	40
	6.5	40
Oven Temp:	45 °C	
Injection Vol:	2 μL	

Ultrashort Chain and Alternative PFAs on the Raptor Polar X

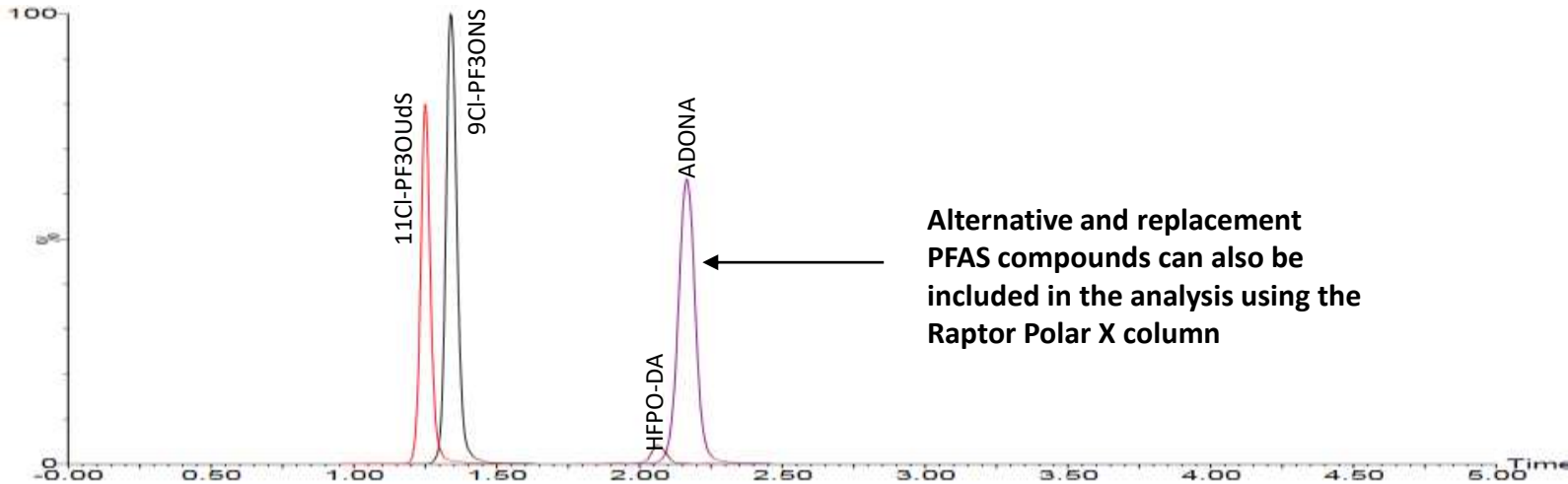
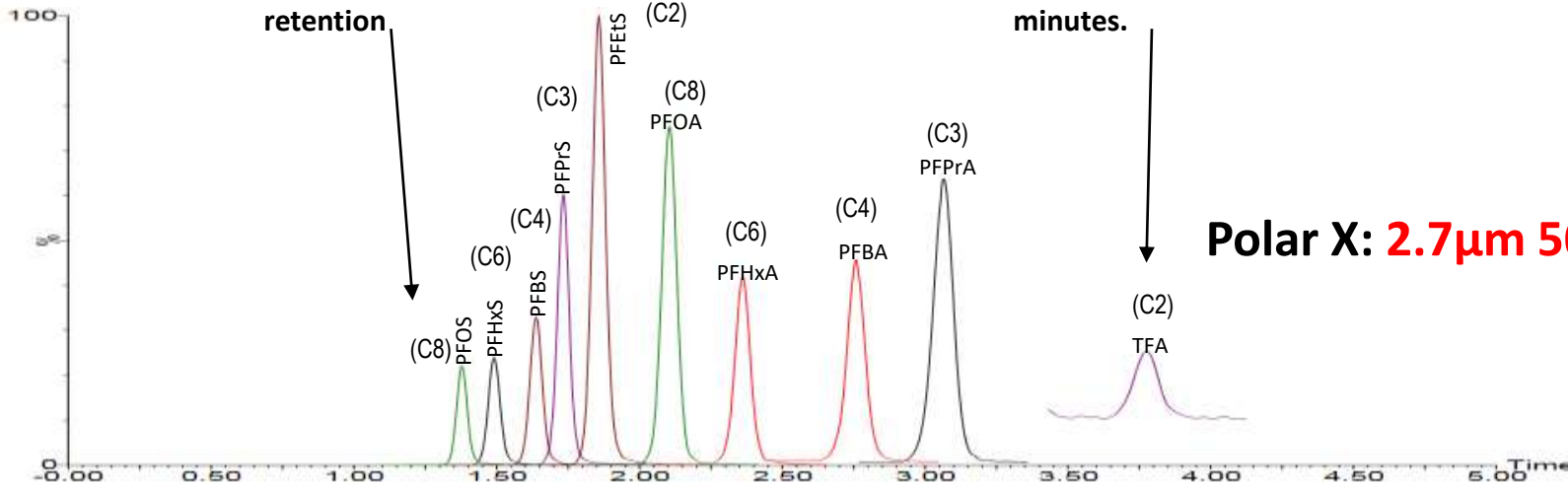
Long chain PFAS elute earlier, but with good retention

Short and ultra-short chain PFAS are retained longer, but still elute in less than 4 minutes.

LC Conditions : (Waters Acquity UPLC)	
Mobile Phase A	10mM ammonium formate, 0.05% formic acid in water
Mobile Phase B	0.05% formic acid in 60:40 acetonitrile:methanol

Polar X: 2.7µm 50x2.1 mm

400 ppt in 50:50 water:methanol



Gradient	Time (min)	%B
	0.00	85
	5.00	85
Injection	10 µL	
Flow Rate	0.5 mL/min	
Run Time	5 min	
Column Temp.	40°C	