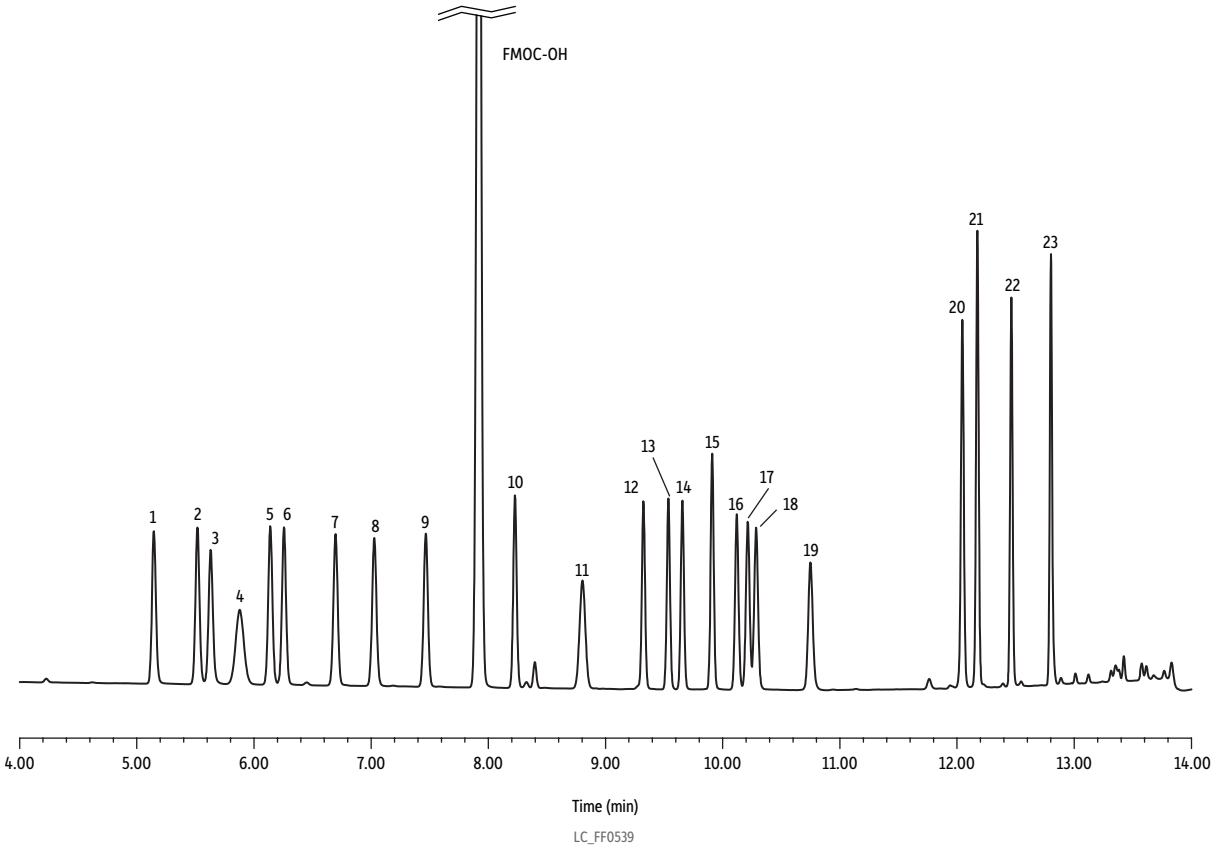
Amino Acids (9-Fluorenylmethyl-Chloroformate Derivatives) on Raptor ARC-18



Peaks	t_R (min)	Conc. (µmole/mL)
1. Arginine (Arg)	5.145	0.4
2. Asparagine (Asn)	5.518	0.4
3. Glutamine (Gln)	5.630	0.4
4. *trans*-4-Hydroxyproline (Hyp)	5.878	0.4
5. Serine (Ser)	6.139	0.4
6. Aspartic acid (Asp)	6.256	0.4
7. Glutamic acid (Glu)	6.696	0.4
8. Threonine (Thr)	7.027	0.4
9. Glycine (Gly)	7.466	0.4
10. Alanine (Ala)	8.227	0.4
11. Proline (Pro)	8.803	0.4
12. Methionine (Met)	9.324	0.4
13. Valine (Val)	9.537	0.4
14. Norvaline	9.656	0.4
15. Tryptophan (Trp)	9.910	0.4
16. Phenylalanine (Phe)	10.120	0.4
17. Isoleucine (Ile)	10.214	0.4
18. Leucine (Leu)	10.285	0.4
19. Cystine	10.749	0.2
20. Histidine (His)	12.045	0.4
21. Lysine (Lys)	12.174	0.4
22. Cysteine (Cys)	12.463	0.4
23. Tyrosine (Tyr)	12.801	0.4

Amino acids are analyzed as 9-fluorenylmethyl-chloroformate derivatives.

Column
Dimensions: 100 mm x 3 mm ID
Particle Size: 2.7 µm
Temp.: 30 °C

Standard/Sample
Diluent: 0.1 N HCl
Conc.: 0.4 µmole/mL for each amino acid (0.2 µmole/mL for cystine)
Inj. Vol.: 1 µL

Mobile Phase
A: 0.1% Formic acid + 20 mM ammonium formate in water
B: 0.1% Formic acid + 10 mM ammonium formate in 90:10 acetonitrile:water

Time (min)	Flow (mL/min)	%A	%B
0.00	0.8	80	20
6.25	0.8	60	40
9.00	0.8	40	60
10.00	0.8	40	60
13.00	0.8	0	100
13.01	0.8	80	20
15.00	0.8	80	20

Detector UV/Vis @ 265, 4.8 nm
Instrument Waters ACQUITY UPLC H-Class
Sample Preparation Derivatization reaction: 50 µL amino acid mix + 100 µL 0.2 N borate buffer (pH 10.0) + 50 µL 15 mM 9-fluorenylmethyl-chloroformate solution + 50 µL acetonitrile. The injection can be performed after 5 minutes of reaction time.

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