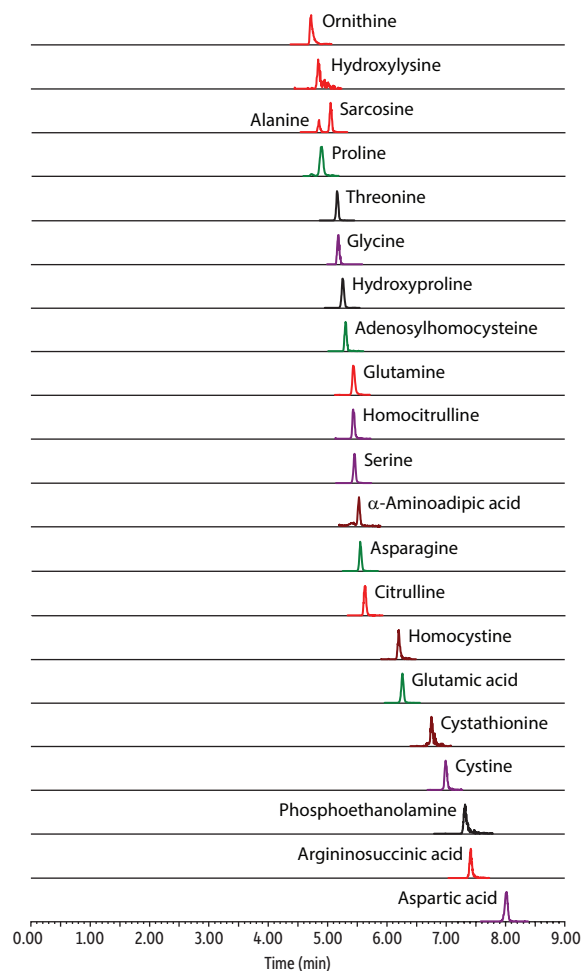
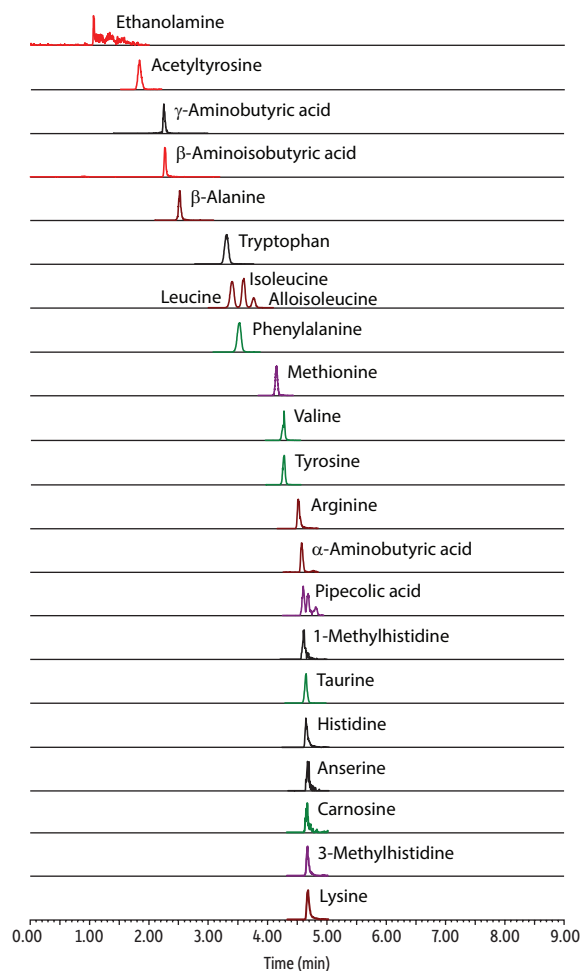


## Amino Acids in Human Plasma on Raptor Polar X

- Separates leucine/isoleucine/alloisoleucine and alanine/sarcosine isomers.
- Simple sample preparation without derivatization.
- Fast chromatographic cycling time.



LC\_CF0767

Peaks	tr (min)	Precursor Ion	Product Ion	Peaks	tr (min)	Precursor Ion	Product Ion
1. Ethanolamine	1.06	62.0	44.1	24. Ornithine	4.72	133.1	70.0
2. Acetyltirosine	1.83	224.1	136.1	25. Hydroxylysine	4.84	163.1	128.1
3. γ-Aminobutyric acid	2.25	104.0	69.0	26. Alanine	4.86	90.0	44.1
4. β-Aminoisobutyric acid	2.27	104.1	30.0	27. Proline	4.89	116.1	70.1
5. β-Alanine	2.52	90.0	30.1	28. Sarcosine	5.05	90.0	44.1
6. Tryptophan	3.31	205.1	146.1	29. Threonine	5.15	120.1	74.1
7. Leucine	3.40	132.1	86.1	30. Glycine	5.19	76.1	30.1
8. Phenylalanine	3.53	166.1	120.1	31. Hydroxyproline	5.26	132.1	86.1
9. Isoleucine	3.60	132.1	86.1	32. Adenosylhomocysteine	5.30	385.0	133.7
10. Alloisoleucine	3.77	132.1	86.1	33. Glutamine	5.43	147.1	84.1
11. Methionine	4.15	150.1	104.1	34. Homocitrulline	5.43	190.1	84.1
12. Valine	4.27	118.1	72.1	35. Serine	5.46	106.1	60.1
13. Tyrosine	4.27	182.1	136.1	36. α-Amino adipic acid	5.53	162.1	98.1
14. Arginine	4.52	175.2	70.1	37. Asparagine	5.54	133.1	74.1
15. α-Aminobutyric acid	4.57	104.0	58.1	38. Citrulline	5.61	176.1	159.1
16. Pipecolic acid	4.60	130.0	84.1	39. Homocystine	6.20	269.1	136.0
17. 1-Methylhistidine	4.62	170.1	124.1	40. Glutamic acid	6.26	148.1	84.1
18. Taurine	4.65	126.1	108.1	41. Cystathionine	6.75	223.1	134.0
19. Histidine	4.65	156.1	110.2	42. Cystine	6.99	241.1	152.0
20. Anserine	4.67	241.2	109.1	43. Phosphoethanolamine	7.32	142.0	44.1
21. Carnosine	4.67	227.2	110.1	44. Argininosuccinic acid	7.41	291.1	70.1
22. 3-Methylhistidine	4.68	170.0	126.0	45. Aspartic acid	8.00	134.1	74.1
23. Lysine	4.68	147.1	84.1				

<b>Column</b>	Raptor Polar X (cat.# 9311A12)		
<b>Dimensions:</b>	100 mm x 2.1 mm ID		
<b>Particle Size:</b>	2.7 μm		
<b>Pore Size:</b>	90 Å		
<b>Guard Column:</b>	Raptor Polar X EXP guard column cartridge 5 mm, 2.1 mm ID, 2.7 μm (cat.# 9311A0252)		
<b>Temp.:</b>	35 °C		
<b>Standard/Sample</b>			
<b>Conc.:</b>	Endogenous Levels (~μmol/L)		
<b>Inj. Vol.:</b>	5 μL		
<b>Mobile Phase</b>			
<b>A:</b>	Water, 0.5% formic acid, 1 mM ammonium formate		
<b>B:</b>	90:10 Acetonitrile:water, 0.5% formic acid, 1 mM ammonium formate		
<b>Time (min)</b>	<b>Flow (mL/min)</b>	<b>%A</b>	<b>%B</b>
0.00	0.3	4	96
2.00	0.3	4	96
10.00	0.3	70	30
10.01	0.3	95	5
11.00	0.3	95	5
11.01	0.3	4	96
13.00	0.3	4	96
<b>Detector</b>	MS/MS		
<b>Ion Mode:</b>	ESI+		
<b>Mode:</b>	MRM		
<b>Instrument</b>	UHPLC		
<b>Sample Preparation</b>	An aliquot of 50 μL of plasma (Control Plasma Level II, Chromsystems) was mixed with 5 μL of 30% sulfosalicylic acid solution for protein precipitation. Following centrifugation at 4200 rpm for 10 minutes, a 27.5 μL aliquot of clear supernatant was mixed with 2 μL of internal standard working solution and 225 μL of mobile phase B prior to LC-MS/MS analysis.		