

3425 Corporate Way
 Duluth, GA 30096

0010 Amino Acid Analysis - 40 Plasma

Methodology: High Pressure Liquid Chromatography

Ranges: Ages 13 and over

Results
 umol/L



**95%
 Reference
 Interval**

Essential Amino Acids

Limiting Amino Acids

Rank	Amino Acid	Result (umol/L)	Quintile	95% Reference Interval
1.	Lysine	148	1st	120 - 318
2.	Methionine	18	1st	14 - 48
3.	Tryptophan	35 L	1st	31 - 83

Branched Chain Amino Acids

Rank	Amino Acid	Result (umol/L)	Quintile	95% Reference Interval
4.	Isoleucine	29 L	1st	35 - 104
5.	Leucine	76 L	1st	74 - 196
6.	Valine	161 L	1st	146 - 370

Other Essential Amino Acids

Rank	Amino Acid	Result (umol/L)	Quintile	95% Reference Interval
7.	Phenylalanine	45 L	1st	42 - 95
8.	Histidine	73	3rd	57 - 114
9.	Threonine	124	3rd	73 - 216

Conditionally Essential Amino Acids

Rank	Amino Acid	Result (umol/L)	Quintile	95% Reference Interval
10.	Arginine	68	3rd	29 - 137
11.	Taurine	39	1st	29 - 136
12.	Glycine	268	3rd	155 - 518
13.	Serine	84	1st	60 - 172

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Functional Categories

Vitamin B6 Status Markers

Item	Results	Quintile Ranking	95% Reference Interval
14. α-aminoadipic acid	<0.5	0.5	<= 1.5
15. α-Amino-n-butyric acid (α-ANB)	10	28	<= 39
16. γ-aminobutyric acid	<0.6	0.6	<= 1.5
17. Cystathionine	<0.2	0.3	<= 0.3

Vascular Function

Item	Results	Quintile Ranking	95% Reference Interval
18. Arginine	68	43 - 107	29 - 137
19. Taurine	39	36 - 99	29 - 136
20. α-aminoadipic acid	<0.5	0.5	<= 1.5

Neurotransmitters and Precursors

Item	Results	Quintile Ranking	95% Reference Interval
21. Phenylalanine	45 L	48 - 77	42 - 95
22. Tyrosine	52	45 - 87	38 - 110
23. Tryptophan	35 L	39 - 69	31 - 83
24. Glutamic Acid	42	33 - 136	24 - 214
25. Taurine	39	36 - 99	29 - 136

Sulfur Amino Acids (Glutathione - related)

Item	Results	Quintile Ranking	95% Reference Interval
26. Methionine	18	17 - 34	14 - 48
27. Cystathionine	<0.2	0.3	<= 0.3
28. Homocystine	<0.6	0.6	<= 0.6
29. Cystine	2.6	1.6 - 16.3	0.8 - 27.5
30. Taurine	39	36 - 99	29 - 136

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Urea Cycle and Ammonia Detoxification

Test Name	Results	Quintile Ranking	95% Reference Interval
31. Arginine	68	43 - 107	29 - 137
32. Citrulline	21 L	22 - 45	18 - 57
33. Ornithine	47	36 - 86	28 - 117
34. Glutamine	625	458 - 771	372 - 876
35. Asparagine	43	39 - 71	31 - 90
36. Aspartic Acid	3.4 L	3.5 - 8.6	2.9 - 12.6

Glycine, Serine and Related Amino Acids

37. Alanine	401	284 - 559	230 - 681
38. Glycine	268	192 - 418	155 - 518
39. Sarcosine	9.3	12.1	<= 19.5
40. Serine	84	74 - 139	60 - 172
41. Phosphoserine	<0.5	0.5	<= 0.8
42. Ethanolamine	7.9	9.3	<= 11.6
43. Phosphoethanolamine	3.5	4.6	<= 7.4

Collagen - Related Amino Acids

44. Proline	153	119 - 279	99 - 363
45. Hydroxyproline	12	16	<= 26
46. Lysine	148	147 - 263	120 - 318
47. Hydroxylysine	<0.6	0.6	<= 0.6

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β-Amino Acids and Derivatives

48. β-Alanine	<1	2.8	<= 5.0
49. Histidine	73	63 97	57 - 114
50. Carnosine	3.1	4.8	<= 6.3
51. 1-Methylhistidine	6	37	<= 52
52. Anserine	24	36	<= 43

DNA (Thymine) Degradation

53. β- Aminoisobutyric Acid	<0.3	1.5	<= 3.2
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Muscle-Specific Amino Acids

54. 3-Methylhistidine	4.2	7.2	<= 9.8
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Ratios

55. Phenylalanine/Tyrosine	0.87	1.10	<= 1.10
56. Glutamic Acid/Glutamine	0.07	0.06 0.23	0.06 - 0.23
57. Hydroxyproline/Proline	0.078	0.152	<= 0.152
58. α-ANB/Leucine	0.13	0.22	<= 0.22
59. Tryptophan/LNAA*	0.081	0.080 0.091	0.080 - 0.091

*Large neutral amino acids (Leu+Ile+Val+Phe+Thr)

These test results in this report are not for the diagnosis of disease. They are intended to provide nutritional guidelines to qualified healthcare professionals with full knowledge of patient history and concerns to assist in their design of an appropriate healthcare program.

Amino Acid Formula Recommendation

The table below shows a customized amino acid formula based on the results of your laboratory profile. The formula is optimized by adding amounts shown in the Grams Added column according to the relative positions of results found.

Directions: Adults mix 1 and 1/2 measuring teaspoon (5g) in juice or water 2 times daily between meals as a dietary supplement, or as directed by a health care provider. Children under 12 years old: 3/4 teaspoon 1-2 times daily between meals. Children under 5 years old: Use 1/4 teaspoon, 1-3 times daily; adjust for body weight.

	Grams Added	% of Formula	Active mg/day
L-Arginine HCl (80% active)	1	7.53	603
L-Histidine HCl (74% active)	1	8.70	644
L-Isoleucine	28	15.09	1,509
L-Leucine	16	13.24	1,324
L-Lysine HCl (80% active)	6	9.20	736
L-Methionine	5	6.38	638
L-Phenylalanine	11	11.57	1,157
Taurine	11	3.67	367
L-Threonine	1	5.29	529
L-Tryptophan	7	3.69	369
L-Valine	10	10.26	1,026
Pyridoxal-5-phosphate	0	0.27	18
Alpha-ketoglutaric acid	0	7.69	520

Total grams added	97
Base Formula amount	203
Total Weight	300

<input checked="" type="checkbox"/> <input type="checkbox"/>	L-5-Hydroxytryptophan	1	0.92	74
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This formula is intended to optimize essential and conditionally essential amino acid intake. Other non-essential amino acids can be produced in human tissues. Pyridoxal-5-phosphate (an active form of vitamin B6) and alpha-ketoglutaric acid are key factors needed for the body's utilization of amino acids.

The formula may be ordered as a powder that dissolves easily in beverages or may be added to foods such as applesauce. Other forms of supplemental dietary protein or amino acids may need to be restricted while using your customized formula. If enhanced energy levels prevent sleep, avoid bedtime use.

This formula is provided as a starting point that may guide decisions about medical treatment based on the test results. It is derived only from the laboratory results included in this report. Final recommendations should be based on consideration of the patient's medical history and current clinical condition.