

Ordering Physician:  
 Metamatrix

3425 Corporate Way  
 Duluth, GA 30096

**0113 Amino Acid Analysis - Bloodspot**

Methodology: High Pressure Liquid Chromatography

Ranges: Ages 13 and over

Results  
 umol/L



**95%  
 Reference  
 Interval**

**Essential Amino Acids**

**Limiting Amino Acids**

Amino Acid	Results (umol/L)	Quintile Ranking	95% Reference Interval
1 Lysine	121	92 - 183	63 - 220
2 Methionine	24	12 - 28	10 - 33
3 Tryptophan	41	28 - 45	24 - 52

**Branched Chain Amino Acids**

Amino Acid	Results (umol/L)	Quintile Ranking	95% Reference Interval
4 Isoleucine	38	35 - 77	28 - 96
5 Leucine	74	71 - 139	59 - 162
6 Valine	141	126 - 229	105 - 266

**Other Essential Amino Acids**

Amino Acid	Results (umol/L)	Quintile Ranking	95% Reference Interval
7 Phenylalanine	56	43 - 72	37 - 86
8 Histidine	26 L	31 - 84	22 - 99
9 Threonine	116	67 - 143	54 - 169

**Conditionally Essential Amino Acids**

Amino Acid	Results (umol/L)	Quintile Ranking	95% Reference Interval
10 Arginine	27 L	28 - 71	17 - 91
11 Taurine	143 L	145 - 245	124 - 282
12 Glycine	394	243 - 449	207 - 559
13 Serine	171	95 - 219	79 - 310

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Functional Categories	Results	Quintile Ranking	95% Reference Interval
	umol/L	1st   2nd   3rd   4th   5th	
<b><u>Vascular Function</u></b>			
14 Arginine	27 L	28   71	17 - 91
15 Taurine	143 L	145   245	124 - 282
<b><u>Neurotransmitters and Precursors</u></b>			
16 Phenylalanine	56	43   72	37 - 86
17 Tyrosine	48	44   85	36 - 99
18 Tryptophan	41	28   45	24 - 52
19 Glutamic Acid	111 L	112   207	97 - 258
20 Taurine	143 L	145   245	124 - 282
<b><u>Sulfur Amino Acids (Glutathione - related)</u></b>			
21 Methionine	24	12   28	10 - 33
22 Taurine	143 L	145   245	124 - 282
<b><u>Urea Cycle and Ammonia Detoxification</u></b>			
23 Arginine	27 L	28   71	17 - 91
24 Citrulline	30	19   41	16 - 51
25 Ornithine	78	68   158	50 - 210
26 Glutamine	379	307   520	209 - 573
27 Asparagine	52	49   77	42 - 88
28 Aspartic Acid	107	44   180	26 - 233
<b><u>Ratios</u></b>			
29 Phenylalanine/Tyrosine	1.17	1.19	<= 1.19
30 Glutamic Acid/Glutamine	0.29	0.22   0.88	0.22 - 0.88
31 Tryptophan/LNAA*	0.096	0.050   0.105	0.050 - 0.105

\*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.

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**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.

	<b>Grams Added</b>	<b>% of Formula</b>	<b>Active mg/day</b>
L-Arginine HCl (80% active)	14	12.54	1,003
L-Histidine HCl (74% active)	37	21.48	1,590
L-Isoleucine	5	7.96	796
L-Leucine	7	10.98	1,098
L-Lysine HCl (80% active)	1	8.21	657
L-Methionine	0	5.16	516
L-Phenylalanine	0	8.64	864
Taurine	10	3.33	333
L-Threonine	0	5.42	542
L-Tryptophan	0	1.48	148
L-Valine	4	8.90	890
Pyridoxal-5-phosphate	0	0.27	20
Alpha-ketoglutaric acid	0	7.69	569

Total grams added	78
Base Formula amount	222
Total Weight	300

<input checked="" type="checkbox"/> <input type="checkbox"/>	L-5-Hydroxytryptophan	0	0.49	30
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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.

