



Clinical Laboratory

3425 Corporate Way
Duluth, GA 30096
770.446.5483 Fax:770.441.2237

Ordering Physician:

Metamatrix

3425 Corporate Way
Duluth, GA 30096

Accession Number: **A0906180215**

Reference Number:

Patient: Sample Report

Age: 47 Sex: Female

Date of Birth: 02/05/1962

Date Collected: 6/17/09

Date Received: 6/18/09

Report Date: 6/18/09

Telephone: (770) 446-4583

Fax: (770) 441-2237

Reprinted: 7/24/09

Comment:

0011 Amino Acid Analysis - 20 Plasma

This report contains reference range adjustments from routine revalidation procedures. It also contains the following three upgrades:

- 1) The amino acids have been reorganized so that they appear in functional categories that can convey more relevant information at a glance. The order is consistent with that found in the newly released Metamatrix Handbook.
- 2) Three calculated ratios have been added: Phenylalanine/Tyrosine, Glutamic Acid/Glutamine, and Tryptophan/LNAA.
- 3) The recommended individualized amino acid powder has been reformulated. The table will now show small amounts added when patient results fall below the middle of the third quintile rather than only when they are below the second quintile. The amounts added increase exponentially as levels fall to lower levels, giving more accurately adjusted amounts according to the levels of physiological demand. Also, rather than showing the constant percentages in the base, the table shows the more useful calculated percentages in each patient formula. The hydrochloride (HCl) forms of arginine, histidine and lysine that have always been used in the formulas are now specified in the table.

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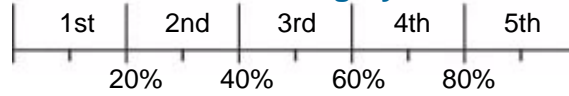
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 Duluth, GA 30096

0011 Amino Acid Analysis - 20 Plasma

Methodology: High Pressure Liquid Chromatography

Ranges are for ages 13 and over

Percentile Ranking by Quintile



**95%
Reference
Interval**

Results
umol/L

Essential Amino Acids

Limiting Amino Acids

1 Lysine	100	L	117	203	99 - 234
2 Methionine	19		16	26	14 - 30
3 Tryptophan	47		35	59	30 - 67

Branched Chain Amino Acids

4 Isoleucine	51		40	72	33 - 89
5 Leucine	109		80	137	68 - 161
6 Valine	198		143	240	123 - 282

Other Essential Amino Acids

7 Phenylalanine	50		43	64	39 - 74
8 Histidine	50		48	72	41 - 82
9 Threonine	94		76	151	63 - 181

Conditionally Essential Amino Acids

10 Arginine	55		48	96	37 - 114
11 Taurine	25	L	31	73	26 - 100
12 Glycine	304		162	348	136 - 430
13 Serine	87		66	115	57 - 133

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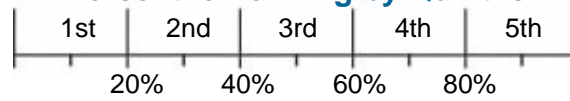
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Percentile Ranking by Quintile



**95%
 Reference
 Interval**

Functional Categories

Vascular Function

Item	Results umol/L	Percentile	95% Reference Interval
14 Arginine	55	48	37 - 114
15 Taurine	25 L	31	26 - 100

Neurotransmitters and Precursors

16 Phenylalanine	50	43	39 - 74
17 Tyrosine	49	38	29 - 80
18 Tryptophan	47	35	30 - 67
19 Glutamic Acid	49	29	23 - 136
20 Taurine	25 L	31	26 - 100

Sulfur Amino Acids (Glutathione - related)

21 Methionine	19	16	14 - 30
22 Taurine	25 L	31	26 - 100

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Methodology: High Pressure Liquid Chromatography

Urea Cycle and Ammonia Detoxification

Test Name	Value	Reference Range
23 Arginine	55	37 - 114
24 Citrulline	20	15 - 44
25 Ornithine	49	23 - 109
26 Glutamine	405	338 - 630
27 Asparagine	35	26 - 56
28 Aspartic Acid	4.9	4.2 - 12.5

Ratios

Test Name	Value	Reference Range
29 Phenylalanine/Tyrosine	1.02	<= 1.44
30 Glutamic Acid/Glutamine	0.12	0.05 - 0.35
31 Tryptophan/LNAA*	0.093	0.061 - 0.12

*Large neutral amino acids

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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.

	Grams Added	% of Formula	Active mg/day
L-Arginine HCl (80% active)	6	10.12	810
L-Histidine HCl (74% active)	5	11.10	822
L-Isoleucine	1	6.83	683
L-Leucine	0	8.92	892
L-Lysine HCl (80% active)	14	12.79	1,023
L-Methionine	1	5.65	565
L-Phenylalanine	1	9.25	925
Taurine	40	13.33	1,333
L-Threonine	2	6.26	626
L-Tryptophan	1	1.86	186
L-Valine	0	7.81	781
Pyridoxal-5-phosphate	0	0.27	21
Alpha-ketoglutaric acid	0	7.69	587

Total grams added	71
Base Formula amount	229
Total Weight	300

✓ L-5-Hydroxytryptophan 0 0.50 30

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.