

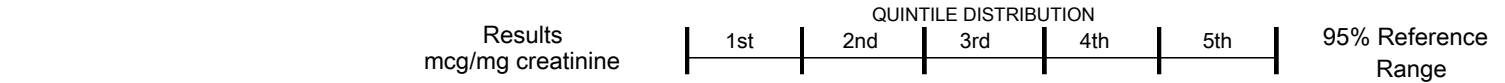


Organix® Comprehensive Profile - Urine

Methodology: LC/Tandem Mass Spectrometry, Colorimetric

This report is not intended for the diagnosis of neonatal inborn errors of metabolism.

Ranges: Ages 13 and over



Compounds of Bacterial or Yeast/Fungal Origin

Bacterial - General

36. Benzoate	<DL		0.6		<= 9.3
37. Hippurate	353		548		<= 1,070
38. Phenylacetate	0.07		0.11		<= 0.18
39. Phenylpropionate	<DL				<= 0.06
40. p-Hydroxybenzoate	3.6	H	1.1		<= 1.8
41. p-Hydroxyphenylacetate	31		19		<= 34
42. Indican	90		64		<= 90
43. Tricarballoylate	0.47		0.73		<= 1.41

L. acidophilus / General Bacterial

44. D-Lactate	3.5		2.0		<= 4.1
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Clostridial Species

45. 3,4-Dihydroxyphenylpropionate	<DL				<= 0.05
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Yeast / Fungal

46. D-Arabinitol	80	H	36		<= 73
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Creatinine = 120mg/dL

<DL = less than detection limit

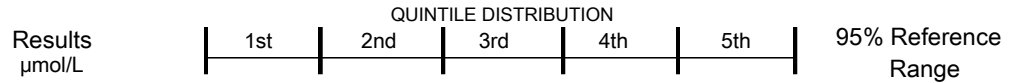
>UL = greater than upper linearity limit



Bloodspot Amino Acids 20 Profile - Blood

Methodology: High Performance Liquid Chromatography

Ranges: Ages 13 and over.



Essential Amino Acids

Limiting Amino Acids

Rank	Amino Acid	Results $\mu\text{mol/L}$	Quintile Distribution (min-max)	95% Reference Range
1.	Lysine	91	92 - 183	63 - 220
2.	Methionine	14	12 - 28	10 - 33
3.	Tryptophan	33	28 - 45	24 - 52

Branched Chain Amino Acids

Rank	Amino Acid	Results $\mu\text{mol/L}$	Quintile Distribution (min-max)	95% Reference Range
4.	Isoleucine	37	35 - 77	28 - 96
5.	Leucine	73	71 - 139	59 - 162
6.	Valine	128	126 - 229	105 - 266

Other Essential Amino Acids

Rank	Amino Acid	Results $\mu\text{mol/L}$	Quintile Distribution (min-max)	95% Reference Range
7.	Phenylalanine	42	43 - 72	37 - 86
8.	Histidine	50	31 - 84	22 - 99
9.	Threonine	53	67 - 143	54 - 169

Conditionally Essential Amino Acids

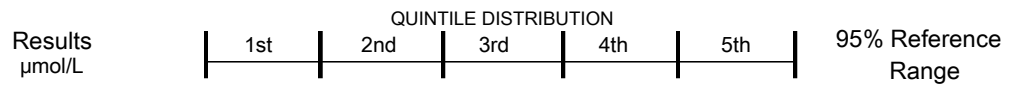
Rank	Amino Acid	Results $\mu\text{mol/L}$	Quintile Distribution (min-max)	95% Reference Range
10.	Arginine	41	28 - 71	17 - 91
11.	Taurine	190	145 - 245	124 - 282
12.	Glycine	470	243 - 449	207 - 559
13.	Serine	99	95 - 219	79 - 310



Bloodspot Amino Acids 20 Profile - Blood

Methodology: High Performance Liquid Chromatography

Ranges: Ages 13 and over.



Functional Categories

Vascular Function

Item	Results $\mu\text{mol/L}$	1st	2nd	3rd	4th	5th	95% Reference Range
14. Arginine	41	28				71	17 - 91
15. Taurine	190	145				245	124 - 282

Neurotransmitters and Precursors

16. Phenylalanine	42	43				72	37 - 86
17. Tyrosine	49	44				85	36 - 99
18. Tryptophan	33	28				45	24 - 52
19. Glutamic Acid	206	112				207	97 - 258
20. Taurine	190	145				245	124 - 282

Sulfur Amino Acids (Glutathione - related)

21. Methionine	14	12				28	10 - 33
22. Taurine	190	145				245	124 - 282

Urea Cycle and Ammonia Detoxification

23. Arginine	41	28				71	17 - 91
24. Citrulline	21	19				41	16 - 51
25. Ornithine	40	68				158	50 - 210
26. Glutamine	412	307				520	209 - 573
27. Asparagine	47	49				77	42 - 88
28. Aspartic Acid	107	44				180	26 - 233

Ratios

29. Phenylalanine/Tyrosine	0.86						≤ 1.19
30. Glutamic Acid/Glutamine	0.50	0.26				0.51	0.22 - 0.88
31. Tryptophan/LNAA*	0.100	0.061				0.093	0.050 - 0.105

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



Allergix® Bloodspot IgG4 Food Antibodies Profile - Blood

Methodology: ELISA

IgG4 results:

	Foods to Avoid		
Negative	Mild +1 and +2	Moderate +3 and +4	Severe +5

Almond
 Aspergillus
 Beef
 Cantaloupe
 Cashew
 Chicken
 Corn
 Crab
 Egg, Whole
 Garlic
 Lobster
 Milk
 Mustard
 Oat
 Orange
 Pea, Green
 Peanut
 Pinto Bean
 Pork
 Rice
 Salmon
 Shrimp
 Soybean
 Strawberry
 Sunflower
 Tomato
 Tuna
 Turkey
 Walnut
 Wheat

Responses reflect IgG levels measured by ELISA with standardized food extracts. The assay yields semi-quantitative antibody concentrations for each food. The concentration readings are categorized into four reaction levels (Negative, Mild, Moderate, or Severe) corresponding to semi-quantitative responses (0/1, +1, +2, +3, +4 and +5) based on relative absorbance readings. The likelihood of adverse reactions to a given food increases as the response level for that food becomes more positive.



Commentary

Lab Comments

:

Corrected result. Previous value was 1.0, verified by V/AUT at 10:04 on 30/10/19.

This test has been developed and its performance characteristics determined by Genova Diagnostics, Inc. It has not been cleared by the U.S. Food and Drug Administration.



3401 TRIAD™ Bloodspot Profile - Blood and Urine

Triad Profile Analyte Pattern Analysis

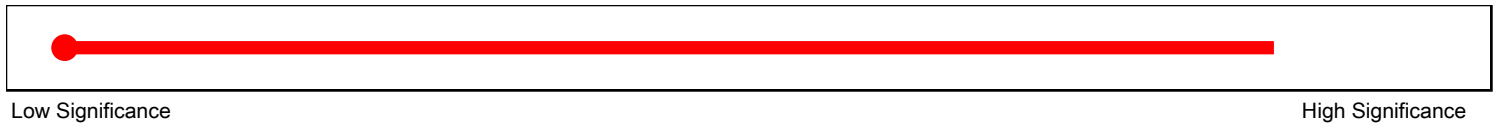
A multi-analyte report can provide greater insight about health risks and special nutrient needs. Patterns of abnormalities can reinforce the degree of significance indicated by a single measurement. Analytes from the various profiles in the TRIAD report are combined below into categories associated with clinical/metabolic conditions.

The categories included cover the most common areas of concern relevant to these profiles. Above each thermometer are listed the analytes used to calculate the degree of significance. An ↑ or ↓ appears when the patient result is outside the fourth quintile of the population.

The thermometer advances to the right as the number and severity of relevant abnormalities increases. The longer the filled bar, the greater the degree of significance or likelihood that a health threat may exist in that category. The preceding laboratory reports provide the detail upon which these thermometers are based.

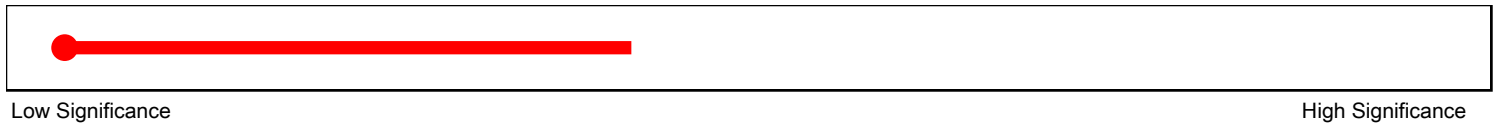
Fatigue (Mitochondrial Impairment)

Isoleucine	Leucine	Phenylalanine ↓	Adipate ↑
Suberate	α-Ketoglutarate	Succinate ↑	Malate ↑
Xanthurenate	Methylmalonate	Formiminoglutamate	



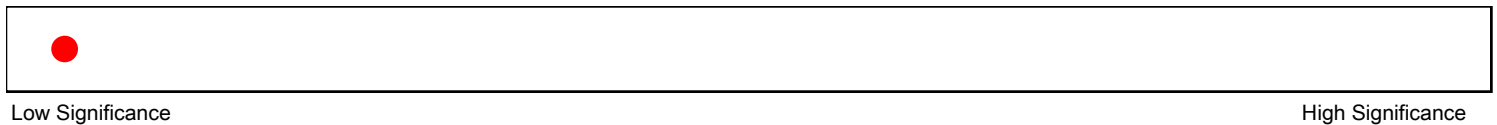
Mental/Emotional

Tryptophan	Tyrosine	Xanthurenate	Methylmalonate
Formiminoglutamate	Quinolate	Vanilmandelate	5-Hydroxyindoleacetate
Homovanillate ↑			



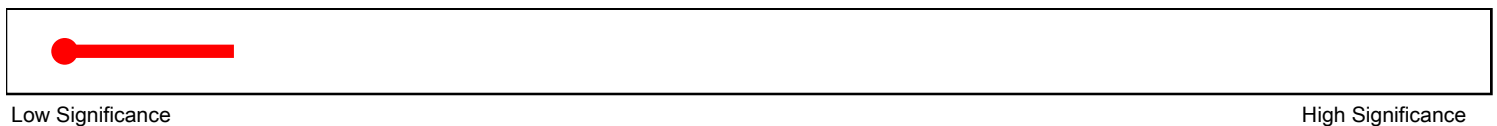
Intestinal Hyperpermeability (Leaky Gut)

Positive IgG scores of 1+ or higher were found for 0 foods.



Digestive Insufficiency

Histidine	Isoleucine	Leucine	Lysine ↓
Methionine	Threonine ↓	Valine	Methylmalonate
Pyruvate	α-Keto-β-Methylvalerate	Glutamine	

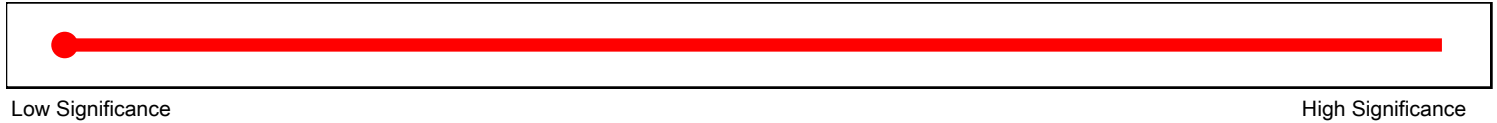




3401 TRIAD™ Bloodspot Profile - Blood and Urine

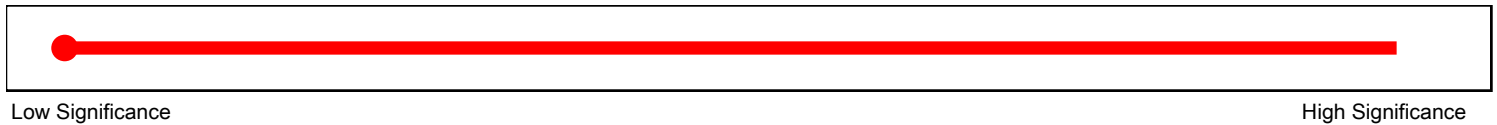
Toxic Exposure

2-Methylhippurate		Glucarate		Sulfate	↓	Orotate
Citrate	↑	Cis-Aconitate	↑	Isocitrate	↑	Quinolate



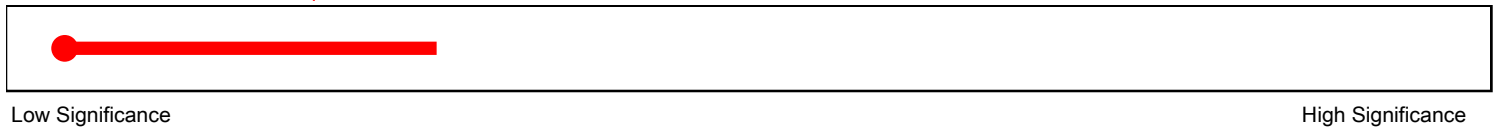
Mitochondrial Functional Impairment

Adipate	↑	Suberate		Ethylmalonate	↑	Pyruvate
L-Lactate	↑	β-Hydroxybutyrate	↑	Succinate	↑	Fumarate
Malate	↑	Hydroxymethylglutarate	↑			



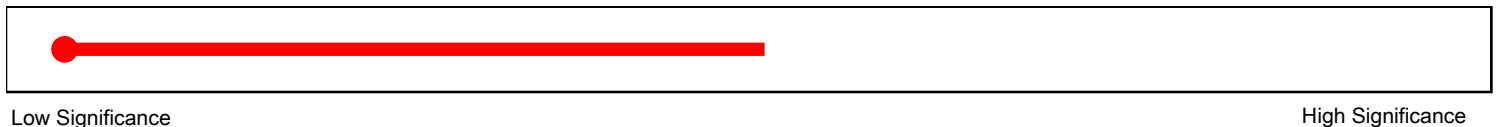
Amino Acid Insufficiency

Arginine		Histidine		Isoleucine		Leucine
Lysine	↓	Methionine		Phenylalanine	↓	Threonine
Tryptophan		Valine		a-Ketoglutarate		Succinate
Sulfate	↓					



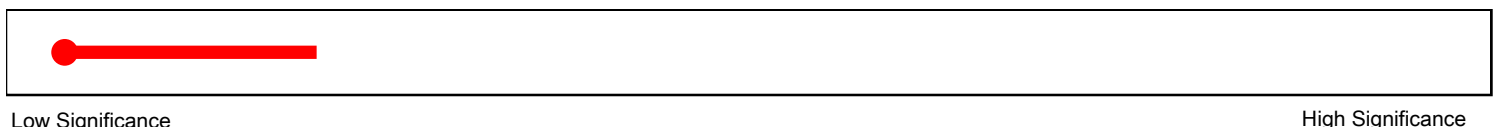
Gut Dysbiosis

D-Arabinitol	↑	Phenylacetate		Phenylpropionate		p-Hydroxyphenylacetate
Indican	↑	Tricarballoylate		D-Lactate	↑	3,4-DHPP*



Detoxification Capacity

Methionine		Glycine		Taurine		Sulfate
Pyroglutamate	↑	α-Hydroxybutyrate				



*3,4-DHPP = 3,4-Dihydroxyphenylpropionate



3401 TRIAD™ Bloodspot Profile - Blood and Urine

Methylation

Xanthurenate

Methylmalonate

Formiminoglutamate



Low Significance

High Significance

*Thermometers are affected when more than nine foods cause reactions of +1 or higher.


3401 TRIAD™ Bloodspot Profile - Blood and Urine
Additional Considerations

Nutrient supplementation is at the *discretion of the treating clinician*. The supplement dose ranges provided below are meant for educational purposes only. These dosage ranges relate to findings commonly found on Genova's nutritional panels and do not apply to specific disease conditions where different dosages may be warranted. Final recommendations should be based on consideration of the patient's medical history and current clinical condition.

Nutrient	Nutrient Need	Clinician Recommendations
Vitamin C	Optional: 0-1000 mg	
Vitamin E (mixed tocopherols)	Optional: 0-100 IU	
Vitamin B-1 (Thiamin)	Low: 10-25 mg	
Vitamin B-2 (Riboflavin)	Low: 10-25 mg	
Vitamin B-3 (Niacin)	Low: 10-50 mg	
Vitamin B-5 (Pantothenic Acid)	Low: 10-25 mg	
Magnesium	Optional: 0-200 mg	
Carnitine	Optional: 0-500 mg	
Coenzyme Q10	Moderate: 60-100 mg	
Lipoic Acid	Low: 50-100 mg	
N-Acetylcysteine	Optional: 0-200 mg	
L-Lysine	Low: 500-1000 mg	
L-Phenylalanine	Low: 250-500 mg	
L-Threonine	Moderate: 500-1000 mg	

Various conditionally essential nutrients and other potentially beneficial interventions appear in this section only if relevant abnormalities are present.