



3425 Corporate Way
Duluth, GA 30096



Patient: **REPORT**
SAMPLE
DOB: November 11, 1995
Sex: F
MRN: 0000002416

Order Number: O5240018
Completed: May 24, 2018
Received: May 24, 2018
Collected: May 24, 2018

Royce Powell, MSCS
Test Doctor
75 Zillicoa Street
, NC 28801

3301 Organix® Comprehensive Profile - Urine
Methodology: LC/Tandem Mass Spectrometry, Colorimetric

Summary of Abnormal Findings

Biomarkers	Findings	Metabolic Pathway
Fatty Acid Metabolism	No Abnormality Found	
Carbohydrate Metabolism		
L-Lactate	H	Glycolysis
Energy Production Markers	No Abnormality Found	
B-Complex Vitamin Markers	No Abnormality Found	
Methylation Cofactor Metabolism	No Abnormality Found	
Neurotransmitter Metabolism Markers		
Homovanillate	H	Dopamine metabolism
5-Hydroxyindoleacetate	H	Serotonin metabolism
Oxidative Damage and Antioxidant Markers		
8-Hydroxy-2-deoxyguanosine	H	Oxidative damage
Detoxification Indicators		
Sulfate	L	Transsulfuration pathway
Bacterial - General		
Phenylacetate	H	Gut bacterial metabolism
p-Hydroxyphenylacetate	H	Gut bacterial metabolism
L. acidophilus/general bacteria	No Abnormality Found	
Clostridial Species	No Abnormality Found	
Yeast/Fungal	No Abnormality Found	



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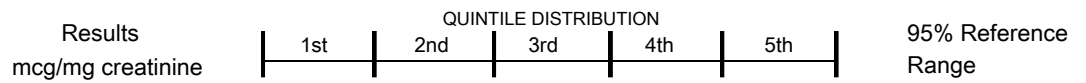


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This report is not intended for the diagnosis of neonatal inborn errors of metabolism.

Ranges: Ages 13 and over



Nutrient Markers

Fatty Acid Metabolism

(Carnitine & B2)

Item	Results	Quintile Distribution	95% Reference Range
1. Adipate	8.5	6.2	<= 11.1
2. Suberate	2.9	2.1	<= 4.6
3. Ethylmalonate	2.0	3.6	<= 6.3

Carbohydrate Metabolism

(B1, B3, Cr, Lipoic Acid, CoQ10)

Item	Results	Quintile Distribution	95% Reference Range
4. Pyruvate	<DL	3.9	<= 6.4
5. L-Lactate	19.0 H	8.5	0.6 - 16.4
6. β-Hydroxybutyrate	4.5	2.1	<= 9.9

Energy Production (Citric Acid Cycle)

(B Comp., CoQ10, Amino Acids, Mg)

Item	Results	Quintile Distribution	95% Reference Range
7. Citrate	487	601	56 - 987
8. Cis-Aconitate	38	51	18 - 78
9. Isocitrate	62	98	39 - 143
10. α-Ketoglutarate	<DL	19.0	<= 35.0
11. Succinate	12.9	11.6	<= 20.9
12. Fumarate	<DL	0.59	<= 1.35
13. Malate	0.6	1.4	<= 3.1
14. Hydroxymethylglutarate	3.2	3.6	<= 5.1

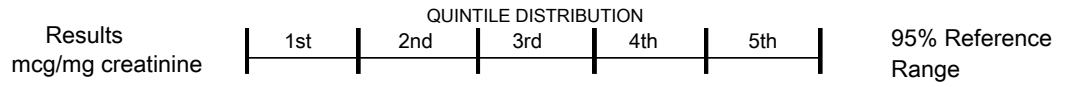


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Nutrient Markers

B-Complex Vitamin Markers

(B1, B2, B3, B5, B6, Biotin)

Item	Results	mcg/mg creatinine	Quintile Distribution	95% Reference Range
15. α-Ketoisovalerate	<DL	0.25	[Visual representation of quintile distribution]	<= 0.49
16. α-Ketoisocaproate	<DL	0.34	[Visual representation of quintile distribution]	<= 0.52
17. α-Keto-β-Methylvalerate	<DL	0.38	[Visual representation of quintile distribution]	<= 1.10
18. Xanthurenate	<DL	0.34	[Visual representation of quintile distribution]	<= 0.46
19. β-Hydroxyisovalerate	3.8	7.6	[Visual representation of quintile distribution]	<= 11.5

Methylation Cofactor Markers

(B12, Folate)

20. Methylmalonate	1.0	1.7	[Visual representation of quintile distribution]	<= 2.3
21. Formiminoglutamate	0.5	1.2	[Visual representation of quintile distribution]	<= 2.2

Cell Regulation Markers

Neurotransmitter Metabolism Markers

(Tyrosine, Tryptophan, B6, Antioxidants)

22. Vanilmandelate	5.2	1.6 - 3.9	[Visual representation of quintile distribution]	1.2 - 5.3
23. Homovanillate	9.1 H	1.9 - 5.7	[Visual representation of quintile distribution]	1.4 - 7.6
24. 5-Hydroxyindoleacetate	10.5 H	2.1 - 5.6	[Visual representation of quintile distribution]	1.6 - 9.8
25. Kynurenate	1.5	1.0	[Visual representation of quintile distribution]	<= 1.5
26. Quinolinate	<DL	4.0	[Visual representation of quintile distribution]	<= 5.8
27. Picolinate	3.1	8.0	[Visual representation of quintile distribution]	2.8 - 13.5

Oxidative Damage and Antioxidant Markers

(Vitamin C and Other Antioxidants)

28. p-Hydroxyphenyllactate	<DL	0.39	[Visual representation of quintile distribution]	<= 0.66
29. 8-Hydroxy-2-deoxyguanosine	13.7 H	5.3	[Visual representation of quintile distribution]	<= 7.6

(Units for 8-hydroxy-2-dexoyguanosine are ng/mg creatinine)

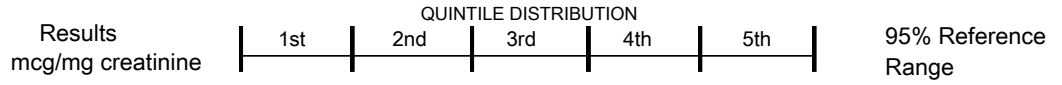


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Toxicants and Detoxification

Detoxification Indicators

(Arg, NAC, Met, Mg, Antioxidants)

Item	Result	Unit	Value	Reference Range
30. 2-Methylhippurate	0.021		0.084	<= 0.192
31. Orotate	<DL		0.69	<= 1.01
32. Glucarate	<DL		6.3	<= 10.7
33. α-Hydroxybutyrate	<DL		0.3	<= 0.9
34. Pyroglutamate	46		59	28 - 88
35. Sulfate	400	L	958 - 2,347	690 - 2,988

Compounds of Bacterial or Yeast/Fungal Origin

Bacterial - General

Item	Result	Unit	Value	Reference Range
36. Benzoate	<DL		0.6	<= 9.3
37. Hippurate	570		548	<= 1,070
38. Phenylacetate	0.38	H	0.11	<= 0.18
39. Phenylpropionate	<DL		1.1	<= 0.06
40. p-Hydroxybenzoate	1.7		1.1	<= 1.8
41. p-Hydroxyphenylacetate	45	H	19	<= 34
42. Indican	32		64	<= 90
43. Tricarballylate	<DL		0.73	<= 1.41

L. acidophilus / General Bacterial

44. D-Lactate	0.2		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	43		36	<= 73
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Creatinine = 23 mg/dL

<DL = less than detection limit

>UL = greater than upper linearity limit

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.


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Additional Considerations

This page 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.

Nutrient	Nutrient Need
Vitamin C	High
Vitamin E (mixed tocopherols)	Moderate
Vitamin B-1 (Thiamin)	Low
Vitamin B-2 (Riboflavin)	Low
Vitamin B-3 (Niacin)	Low
Vitamin B-5 (Pantothenic Acid)	Low
Coenzyme Q10	Low
Lipoic Acid	Low
N-Acetylcysteine	Low
Need for other antioxidants	Moderate

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

Amino acids listed on this page result from functional markers of individual amino acid insufficiency and do not reflect amino acids measured in plasma.



3301 Organix® Comprehensive Profile - Urine

General Supplement Ranges

These supplement ranges are not adjusted for age, sex, or gender.

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.

Nutrient	Adult Dosage Range*
Vitamin C	0-1000 mg
Vitamin D	0-2000 IU
Vitamin E (mixed tocopherols)	0-400 IU
Vitamin B-1 (Thiamin)	0-50 mg
Vitamin B-2 (Riboflavin)	0-50 mg
Vitamin B-3 (Niacin)	0-50 mg
Vitamin B-5 (Pantothenic Acid)	0-100 mg
Vitamin B-6 (Pyridoxine)	0-50 mg
Vitamin B-12 (Cobalamin)	0-1000 mcg
Folic Acid	0-1000 mcg
Biotin	0-400 mcg
Magnesium	0-400 mg
Selenium	0-200 mcg
Carnitine	0-1000 mg
Coenzyme Q10	0-200 mg
Lipoic Acid	0-200 mg
N-Acetylcysteine	0-1000 mg
L-Arginine	0-1000 mg
Glycine	0-3000 mg

*Dosage ranges are adapted from the textbook *Nutritional Medicine* by Alan Gaby, M.D.¹

1. Gaby AR. *Nutritional Medicine*. Vol 265: Fritz Perlberg Publishing; 2011.