

Ordering Physician:

Metamatrix

3425 Corporate Way
Duluth, GA 30096

Accession Number: **A0902200218**

Reference Number:

Patient: Sample Report

Age: 41 *Sex:* Male

Date of Birth: 02/05/1968

Date Collected: 2/19/09

Date Received: 2/20/09

Report Date: 2/20/09

Telephone: (770) 446-4583

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Reprinted: 3/16/09

Comment:

Reference ranges have been changed for some analytes due to method improvements. A low limit has been added to pyroglutamate.

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Metamatrix

3425 Corporate Way

Duluth, GA 30096

0091 Organix™ Comprehensive Profile

Methodology: LC/Tandem Mass Spectroscopy, Colorimetric

Summary of abnormal results:

	<u>Findings</u>	<u>Intervention Options</u>	<u>Common Metabolic Association</u>
<u>Fatty Acid Metabolism</u>			
Ethylmalonate	High	Carnitine, B2	Fatty acid oxidation
<u>Carbohydrate Metabolism</u>			
β-Hydroxybutyrate		Cr, V, Lipoic Acid, Mg, Mn	Ketosis
<u>Energy Production Markers</u>			
Succinate	High	CoQ10	ATP production
Fumarate	Very High	CoQ10	ATP production
Hydroxymethylglutarate	High	CoQ10	HMG-CoA reductase inhibition
<u>B-Complex Vitamin Markers</u>			
β-Hydroxyisovalerate		Biotin, B2	Impaired Isoleucine metabolism
<u>Methylation Cofactor Markers</u>			
No Abnormality Found			
<u>Neurotransmitter Metabolism Markers</u>			
Vanilmandelate	Low	Tyrosine, Phenylalanine	Epi- & Norepinephrine turnover inhibition
Homovanillate	Low	Tyrosine	Dopamine turnover inhibition
Quinolate	High	Magnesium, Immune support	Receptor agonist
<u>Oxidative Damage and Antioxidant Markers</u>			
8-Hydroxy-2-deoxyguanosine	High	Vitamin C, Vitamin E	DNA oxidation product
<u>Detoxification Indicators</u>			
2-Methylhippurate	High	Glycine	Xylene exposure
<u>Bacterial - General</u>			
Hippurate	High	Glycine	Hepatic Phase II conjugation
p-Hydroxyphenylacetate	Very High	Probiotics	Intestinal Bacterial Overgrowth

L. acidophilus / general bacteria

No Abnormality Found

Clostridial Species

No Abnormality Found

Yeast/Fungal

D-Arabinitol	High	Antifungals	Yeast Overgrowth
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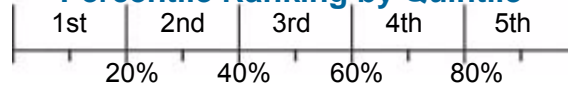
A0902200218
Sample Report

0091 Organix™ Comprehensive Profile

Methodology: LC/Tandem Mass Spectroscopy, Colorimetric

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

Percentile Ranking by Quintile



95% Reference Interval

Ranges are for ages 13 and over

NUTRIENT MARKERS

Fatty Acid Metabolism
(Carnitine & B2)

Results
 ug/mg creatinine

Item	Result	Percentile	Reference Interval
1 Adipate	4.9	~45%	<= 11.7
2 Suberate	1.5	~45%	<= 3.7
3 Ethylmalonate	4.2 H	~85%	<= 6.3

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

Item	Result	Percentile	Reference Interval
4 Pyruvate	2.3	~45%	<= 7.1
5 L-Lactate	5	~20%	3 - 47
6 β-Hydroxybutyrate	<DL*	~85%	<= 9.7

Energy Production (Citric Acid Cycle)
(B comp., CoQ10, Amino acids, Mg)

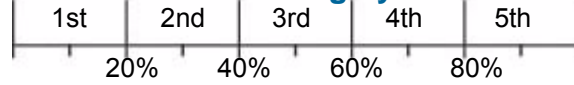
Item	Result	Percentile	Reference Interval
7 Citrate	350	~45%	44 - 1,032
8 Cis-Aconitate	25	~20%	16 - 86
9 Isocitrate	85	~45%	43 - 157
10 α-Ketoglutarate	15	~60%	<= 38
11 Succinate	13.5 H	~85%	<= 25.7
12 Fumarate	1.80 H	~95%	<= 1.69
13 Malate	1.4	~85%	<= 3.2
14 Hydroxymethylglutarate	5.1 H	~95%	<= 6.0

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B-Complex Vitamin Markers
 (B1, B2, B3, B5, B6, Biotin)

Results
 ug/mg creatinine

15	a-Ketoisovalerate	<DL*	0.37	<= 0.69
16	a-Ketoisocaproate	0.05	0.45	<= 0.71
17	a-Keto-β-Methylvalerate	<DL*	0.31	<= 0.86
18	Xanthurenate	0.36	0.89	<= 1.34
19	β-Hydroxyisovalerate	2.1	8.2	<= 11.7

Methylation Cofactor Markers
 (B12, Folate)

20	Methylmalonate	1.7	1.7	<= 2.4
21	Formiminoglutamate	0.3	1.8	<= 2.6

CELL REGULATION MARKERS

Neurotransmitter Metabolism Markers
 (Tyrosine, Tryptophan, B6, antioxidants)

22	Vanilmandelate	1.3 L	1.7	4.5	1.2 - 6.0
23	Homovanillate	1.5 L	2.0	7.2	1.2 - 13.9
24	5-Hydroxyindoleacetate	3.2	2.2	5.7	1.7 - 9.7
25	Kynurenate	2.5	2.8	<= 4.4	
26	Quinolinate	4.9 H	3.7	<= 5.2	
27	Picolinate	6.5	8.5	3.1 - 15.0	

Oxidative Damage and Antioxidant Markers
 (Vitamin C and other antioxidants)

28	p-Hydroxyphenyllactate	0.62	1.09	<= 2.14
29	8-Hydroxy-2-deoxyguanosine **	6.0 H	5.3	<= 7.6

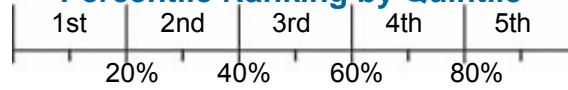
** Units for 8-Hydroxy-2-deoxyguanosine are ng/mg creatinine

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TOXICANTS AND DETOXIFICATION

Detoxification Indicators
 (Arg, NAC, Met, Mg, antioxidants)

Results
 ug/mg creatinine

Code	Indicator	Result	Percentile	Reference Interval
30	2-Methylhippurate	0.199 H	0.089	<= 0.218
31	Orotate	0.3	0.8	<= 1.4
32	Glucarate	7.5	8.1	<= 14.5
33	a-Hydroxybutyrate	0.3	0.4	<= 1.4
34	Pyroglutamate	62	65	30 - 109
35	Sulfate	1,058	986 - 2,353	762 - 2,778

COMPOUNDS OF BACTERIAL OR YEAST/FUNGAL ORIGIN

Bacterial - general

36	Benzoate	<DL*	1.1	<= 27.6
37	Hippurate	933 H	586	<= 1,102
38	Phenylacetate	<DL*	0.08	<= 0.29
39	Phenylpropionate	<DL*	0.4	<= 0.4
40	p-Hydroxybenzoate	0.1	1.1	<= 2.9
41	p-Hydroxyphenylacetate	>200 H	23	<= 40
42	Indican	19	77	<= 120
43	Tricarballic acid	0.41	0.85	<= 1.55

L. acidophilus / general bacterial

44	D-Lactate	0.3	2.1	<= 6.5
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Clostridial species

45	3,4-Dihydroxyphenylpropionate	<DL*	0.12	<= 0.12
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Yeast / Fungal

46	D-Arabinitol	39 H	32	<= 59
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Creatinine = 235 mg/dL

* <DL = less than detection limit

Supplement Recommendation Summary

With knowledge of a patient's full medical history and concerns, the Organix Comprehensive Profile laboratory results may be used to help healthcare professionals create an individually optimized nutritional support program. Based strictly on the results from this test, the summary table below shows estimates of nutrient doses that may help to normalize nutrient-dependent metabolic functions. All amounts are adult doses that should be adjusted for children according to body weight and indication of need.

Customized Vitamin and Mineral Formulation

Nutrients listed in this section are normally contained in a multi-vitamin preparation. "Base" amounts may be used for insurance of health even when no abnormalities are found.

Customized preparations of the multi-vitamin/mineral formula shown below may be produced by compounding pharmacies. If such a product is made according to these specifications each dose should be thoroughly stirred into a few ounces of water or diluted fruit juice to allow bubbles to form and avoid stomach bloating effects.

Nutrient	Daily Amounts	
	Base	Units Added
Vitamin A*	2500 IU	
B-Carotene*	5500 IU	
Vitamin C	250 mg	2000 mg
Vitamin D*	400 IU	
Vitamin E	100 IU	400 IU
Vitamin K*	100 mcg	
Thiamin (B1)	5 mg	
Riboflavin (B2)	5 mg	10 mg
Niacin (B3)	25 mg	
Pyridoxine (B6)	15 mg	
Folic Acid	400 mcg	
Vitamin B12	50 mcg	
Biotin	100 mcg	
Pantothenic Acid (B5)	25 mg	
Calcium	500 mg	
Iodine*	75 mcg	
Magnesium	250 mg	200 mg
Zinc*	15 mg	
Selenium	100 mcg	200 mcg
Copper	1 mg	
Manganese	5 mg	
Chromium	200 mcg	
Molybdenum*	25 mcg	
Boron*	1 mg	
Citric Acid*	200 mg	
Malic Acid*	200 mg	

* Nutrients with an asterisk are not modified based on the Organix test results.

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Other Items Indicated for individual supplementation

Various conditionally essential nutrients and other potentially beneficial interventions appear in this section only if relevant abnormalities are present. These ingredients are not included in the customized vitamin formula on the previous page.

Potential to Benefit from Probiotics	Moderate
Antifungals	As needed
Carnitine	400 mg
Coenzyme Q10	120 mg
Glycine	1000 mg
Need for other antioxidants	Moderate
Tyrosine	1000 mg

· These guidelines are intended as a starting point for the clinician who requested the test and are based only on the laboratory results included in this report. Final recommendations should be implemented by the clinician with consideration of medical history and current clinical observations.
· These tests are not intended for the diagnosis of specific disorders.