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Ordering Physician:

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1234 Main St
Anywhere, GA 30096

Accession Number: **A1201040006**

Reference Number:

Patient: Sample Report

Age: 49 *Sex:* Female

Date of Birth: 02/05/1962

Date Collected: 1/3/12

Date Received: 1/4/12

Report Date: 1/4/12

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Reprinted: 5/8/12

Comment:

0410 Triad™ Bloodspot Profile

This report contains the following:

1. Laboratory data
 - Organix™ Comprehensive Profile
 - Amino Acids 20 - Blood Spot
 - IgG Bloodspot Foods (30 Antigens)
2. Triad Profile Analyte Pattern Analysis

To view your online Food Reaction Patient Guide, please visit our website at www.metametrix.com/triad and select the Downloads tab on the top row navigation.

0410 Triad™ Bloodspot Profile**Summary of abnormal results:**

	<u>Findings</u>	<u>Intervention Options</u>	<u>Metabolic Association</u>
Fatty Acid Metabolism			
No Abnormality Found			
Carbohydrate Metabolism			
No Abnormality Found			
Energy Production Markers			
Isocitrate	Very Low	Free-form amino acids	Amino Acid insufficiency
Succinate	High	CoQ10	ATP production
Fumarate	High	CoQ10	ATP production
B-Complex Vitamin Markers			
Xanthurenate	Very High	B6	Impaired Tryptophan metabolism
Methylation Cofactor Markers			
No Abnormality Found			
Neurotransmitter Metabolism Markers			
Vanilmandelate	Low	Support Adrenal Function	Epi- & Norepinephrine turnover inhibition
Homovanillate	Very Low	Tyrosine	Dopamine turnover inhibition
5-Hydroxyindoleacetate	Low	5-HTP	Serotonin turnover inhibition
Picolinate	Very Low	Limit omega-3 PUFA, add protein	Suppressed inflammatory responses
Oxidative Damage and Antioxidant Markers			
No Abnormality Found			
Detoxification Indicators			
No Abnormality Found			
Bacterial - General			
No Abnormality Found			
L. acidophilus/general bacteria			
D-Lactate	High	Non D-lactate forming Probiotics	Intestinal bacterial overgrowth (L. acidophilus)
Clostridial species			
3,4-Dihydroxyphenylpropionate	Very High	Probiotics (S. Boulardii)	Intestinal bacterial overgrowth (Clostridial sp.)
Yeast/Fungal			
No Abnormality Found			
Essential Amino Acids			
Number of abnormal aminos	3	Customized free from amino acids	Amino Acid insufficiency
Neuroendocrine Metabolism			
Number of abnormal aminos	1	Customized free from amino acids	Amino Acid insufficiency
Ammonia/Energy Metabolism			
No Abnormality Found			
Food Antibody Reactions (No. of foods)			

Mild (+1 and +2)	1	Use Elimination Diet	Intestinal hyperpermeability
Moderate (+3 and +4)	2	Use Elimination Diet	Intestinal hyperpermeability
Severe (+5)	2	Use Elimination Diet	Intestinal hyperpermeability
Total Number >= +1	5	Glutamine	Intestinal hyperpermeability

A1201040006
Sample Report

Organix™ Comprehensive - Urine

Methodology: LC/Tandem Mass Spectroscopy, Colorimetric

Results are expressed as mcg/mg creatinine.

Ranges: Ages 13 and over.



**95%
Reference
Interval**

Nutrient Markers

Results

Fatty Acid Metabolism

(Carnitine & B2)

Item	Value	Quintile	Reference Interval
1 Adipate	5.9	4th	<= 11.1
2 Suberate	1.3	3rd	<= 4.6
3 Ethylmalonate	0.3	1st	<= 6.3

Carbohydrate Metabolism

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

Item	Value	Quintile	Reference Interval
4 Pyruvate	<DL*	4th	<= 6.4
5 L-Lactate	10.1	4th	1.6 - 57.1
6 β-Hydroxybutyrate	<DL*	4th	<= 9.9

Energy Production (Citric Acid Cycle)

(B comp., Q10, Amino acids, Mg)

Item	Value	Quintile	Reference Interval
7 Citrate	219	2nd	56 - 987
8 Cis-Aconitate	50	4th	18 - 78
9 Isocitrate	17 L	1st	39 - 143
10 α-Ketoglutarate	3.7	2nd	<= 35.0
11 Succinate	16.1 H	4th	<= 20.9
12 Fumarate	0.63 H	4th	<= 1.35
13 Malate	0.3	2nd	<= 3.1
14 Hydroxymethylglutarate	0.8	1st	<= 5.1

B-Complex Vitamin Markers

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

Item	Value	Quintile	Reference Interval
15 α-Ketoisovalerate	0.11	3rd	<= 0.49
16 α-Ketoisocaproate	<DL*	1st	<= 0.52
17 α-Keto-β-Methylvalerate	<DL*	3rd	<= 1.10
18 Xanthurenate	0.59 H	4th	<= 0.46
19 β-Hydroxyisovalerate	2.2	1st	<= 11.5

Methylation Cofactor Markers

(B12, Folate)

Item	Value	Quintile	Reference Interval
20 Methylmalonate	0.2	1st	<= 2.3
21 Formiminoglutamate	0.1	1st	<= 2.2

Organix™ Comprehensive - Urine

Methodology: LC/Tandem Mass Spectroscopy, Colorimetric

Ranges: Ages 13 and over.

Cell Regulation Markers

Neurotransmitter Metabolism Markers

(Tyrosine, Tryptophan, B6, antioxidants)

Item	Value	Unit	Quintile Ranking	95% Reference Interval
22 Vanilmandelate	1.2	L	1.6 - 3.9	1.2 - 5.3
23 Homovanillate	1.3	L	1.9 - 5.7	1.4 - 7.6
24 5-Hydroxyindoleacetate	1.9	L	2.1 - 5.6	1.6 - 9.8
25 Kynurenate	0.6		1.0	<= 1.5
26 Quinolate	0.9		4.0	<= 5.8
27 Picolinate	2.7	L	8.0	2.8 - 13.5

Oxidative Damage and Antioxidant Markers

(Vitamin C and other antioxidants)

28 p-Hydroxyphenyllactate	0.14		0.39	<= 0.66
29 8-Hydroxy-2-deoxyguanosine*	2.2		5.3	<= 7.6

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

Toxicants and Detoxification

Detoxification Indicators

(Arg, NAC, Met, Mg and antioxidants)

30 2-Methylhippurate	0.075		0.084	<= 0.192
31 Orotate	<DL*		0.69	<= 1.01
32 Glucarate	0.7		6.3	<= 10.7
33 a-Hydroxybutyrate	0.2		0.3	<= 0.9
34 Pyroglutamate	30		59	28 - 88
35 Sulfate	2,122		958 - 2,347	690 - 2,988

Organix™ Comprehensive - Urine

Methodology: LC/Tandem Mass Spectroscopy, Colorimetric

Ranges: Ages 13 and over.

Compounds of Bacterial or Yeast/Fungal Origin

Bacterial - general

Item	Value	Unit	Reference Range
36 Benzoate	<DL*		<= 9.3
37 Hippurate	56		<= 1,070
38 Phenylacetate	<DL*		<= 0.18
39 Phenylpropionate	<DL*		<= 0.06
40 p-Hydroxybenzoate	<DL*		<= 1.8
41 p-Hydroxyphenylacetate	15		<= 34
42 Indican	19		<= 90
43 Tricarballoylate	0.14		<= 1.41

L. acidophilus / general bacterial

44 D-Lactate	3.2 H		<= 4.3
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Clostridial species

45 3,4-Dihydroxyphenylpropionate	0.08 H		<= 0.05
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Yeast / Fungal

46 D-Arabinitol	32		<= 73
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Creatinine = 210 mg/dl

* <DL = less than detection limit



Amino Acid Analysis - Bloodspot

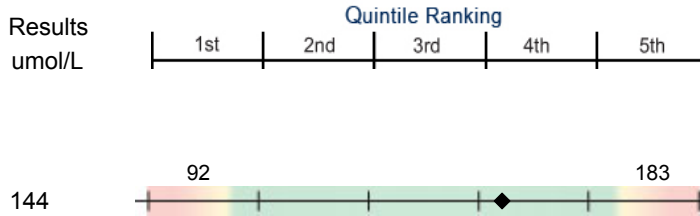
Methodology: ION Exchange HPLC

Ranges: Ages 13 and over

Essential Amino Acids

Limiting Amino Acids

1 Lysine



**95%
Reference
Interval**

2 Methionine



3 Tryptophan



Branched Chain Amino Acids

4 Isoleucine



5 Leucine



6 Valine



Other Essential Amino Acids

7 Phenylalanine



8 Histidine



9 Threonine



Conditionally Essential Amino Acids

10 Arginine



11 Taurine



12 Glycine



13 Serine

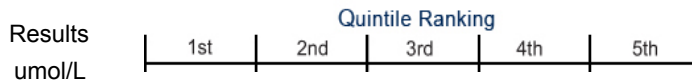


Amino Acid Analysis - Bloodspot

Methodology: ION Exchange HPLC

Ranges: Ages 13 and over

**95%
Reference
Interval**



Functional Categories

Vascular Function

Item	Results umol/L	Quintile Ranking	95% Reference Interval
14 Arginine	47	Between 28 and 71	17 - 91
15 Taurine	178	Between 145 and 245	124 - 282

Neurotransmitters and Precursors

16 Phenylalanine	33 L	Between 43 and 72	37 - 86
17 Tyrosine	57	Between 44 and 85	36 - 99
18 Tryptophan	20 L	Between 28 and 45	24 - 52
19 Glutamic Acid	114	Between 112 and 207	97 - 258
20 Taurine	178	Between 145 and 245	124 - 282

Sulfur Amino Acids (Glutathione - related)

21 Methionine	13	Between 12 and 28	10 - 33
22 Taurine	178	Between 145 and 245	124 - 282

Urea Cycle and Ammonia Detoxification

23 Arginine	47	Between 28 and 71	17 - 91
24 Citrulline	36	Between 19 and 41	16 - 51
25 Ornithine	155	Between 68 and 158	50 - 210
26 Glutamine	388	Between 307 and 520	209 - 573
27 Asparagine	73	Between 49 and 77	42 - 88
28 Aspartic Acid	45	Between 44 and 180	26 - 233

Ratios

29 Phenylalanine/Tyrosine	0.58	Between 0.26 and 0.51	<= 1.19
30 Glutamic Acid/Glutamine	0.38	Between 0.061 and 0.093	0.22 - 0.88
31 Tryptophan/LNAA*	0.056 L	Between 0.061 and 0.093	0.050 - 0.105

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

Bloodspot™ IgG Food Antibodies

Methodology: ELISA

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

Aspergillus	Almond	Egg, Whole	Milk
Beef		Cashew	Peanut
Cantaloupe			
Chicken			
Corn			
Crab			
Garlic			
Lobster			
Mustard Seed			
Oat			
Orange			
Pea, Green			
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, or +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.

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 **X** appears when the patient result is in the fifth quintile of the population. An additional H or L next to an analyte indicates that the patient result is outside the reference limit or interval for that analyte.

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 L	Phenylalanine L X	Adipate
Suberate	aKG	Succinate H	Malate
Xanthurenate H X	MeMalonate	FIGLU	



Low significance

High significance

Mental/Emotional

Tryptophan L X	Tyrosine	Xanthurenate H X	MeMalonate
FIGLU	Quinolate	VMA L	5-HIA L
HVA			



Low significance

High significance

Intestinal Hyperpermeability (Leaky Gut)

Positive IgG scores of 1+ or higher were found for 5 foods.



Low significance

High significance

Digestive Insufficiency

Histidine	Isoleucine	Leucine L	Lysine
Methionine	Threonine	Valine	MeMalonate
Pyruvate	aKbMeVal	Glutamine	

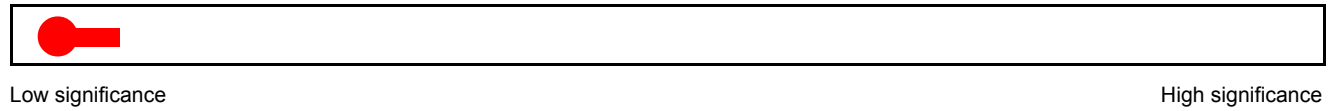


Low significance

High significance

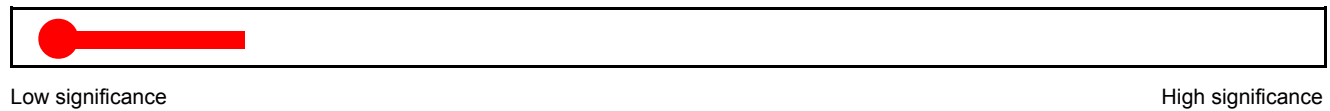
Toxic Exposure

2-MeHipp	Glucarate	Sulfate	Orotate
Citrate	Cis-Aconitate	Isocitrate	Quinolate



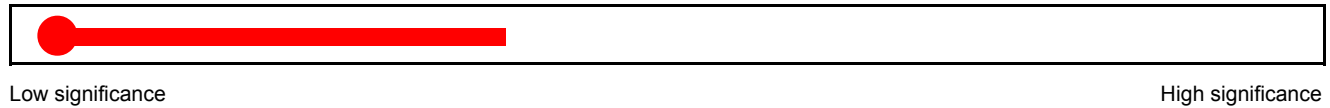
Mitochondrial Functional Impairment

Adipate	Suberate	Ethylmalonate	Pyruvate
L-Lactate	β-HB	Succinate H	Fumarate H
Malate	HMG		



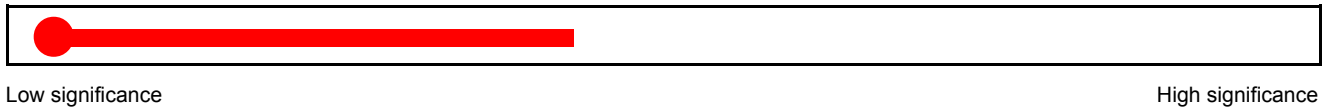
Amino Acid Insufficiency

Arginine	Histidine	Isoleucine	Leucine L
Lysine	Methionine	Phenylalanine L X	Threonine
Tryptophan L X	Valine	aKG	Succinate H
Sulfate			



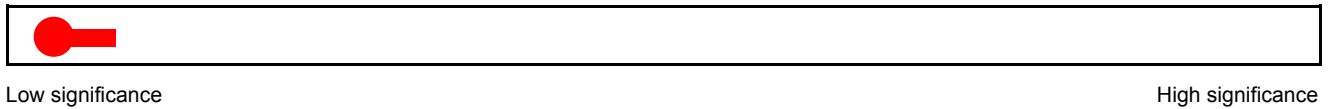
Gut Dysbiosis

D-Arabinitol	PhAc	PhProp	phPhAc
Indican	Tricarb	D-Lactate H	3,4-DHPP H X



Detoxification Capacity

Methionine	Glycine	Taurine	Sulfate
Pyroglutamate	AHB		



Methylation

Xanthurenate **H X**

MeMalonate

FIGLU



Low significance

High significance

<u>Abbreviation</u>	<u>Analyte Name</u>	<u>Abbreviation</u>	<u>Analyte Name</u>
2-MeHipp	2-Methylhippurate	HVA	Homovanillate
5-HIA	5-Hydroxyindoleacetate	HMG	Hydroxymethylglutarate
8-OhdG	8-Hydroxy-2-deoxyguanosine	IgG	Immunoglobulin G*
AHB	a-Hydroxybutyrate	MeMalonate	Methylmalonate
aKbMeVal	a-Keto-β-Methylvalerate	PhAc	Phenylacetate
AKG	a-ketoglutarate	PhProp	Phenylpropionate
aKiCap	a-Ketoisocaproate	pHBenz	p-Hydroxybenzoate
aKiVal	a-Ketisovalerate	pHPhAc	p-Hydroxyphenylacetate
BHB	β-Hydroxybutyrate	pHPhLac	p-Hydroxyphenyllactate
BHiVal	β-Hydroxyisovalerate	Tricarb	Tricarballylate
3,4-DHPP	3,4-Dihydroxyphenylpropionate	VMA	Vanilmandelate
FIGLU	Formiminoglutamate		

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

Customized Vitamin-Mineral Formula

With knowledge of a patient's full medical history and concerns, the Triad Profile laboratory results may be used to help 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.

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.

	Daily Amounts	
	Base	Units Added
Vitamin A*	2500 IU	
B-Carotene*	5500 IU	
Vitamin C	250 mg	500 mg
Vitamin D*	400 IU	
Vitamin E (Mixed Tocopherols)	100 IU	800 IU
Vitamin K*	100 mcg	
Thiamin (B1)	5 mg	
Riboflavin (B2)	1.3 mg	10 mg
Niacin (B3)	25 mg	
Pyridoxine (B6)	15 mg	80 mg
Folic Acid (or 5-Methyl-THF)	400 mcg	
Vitamin B12	50 mcg	
Biotin	100 mcg	
Pantothenic Acid (B5)	25 mg	
Calcium citrate	500 mg	
Iodine*	75 mcg	
Magnesium	250 mg	
Zinc*	15 mg	
Selenium	100 mcg	50 mcg
Copper	1.5 mg	
Manganese*	5 mg	
Chromium	200 mcg	
Molybdenum*	25 mcg	
Boron*	1 mg	

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

MM01

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.

Amino acids listed on this page result from functional markers of individual amino acid insufficiency and do not reflect amino acids measured in plasma. Any amino acids that appear may be needed in addition to the customized amino acid formula on the following page.

Item	Amount
Antibiotics active against L. Acidophilus	As Needed
Coenzyme Q10	60 mg
Need for Other Antioxidants	Minimal
S. boulardii	As needed

Customized Free-Form Amino Acids

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)	0	7.94	636
L-Histidine HCl (74% active)	2	9.90	732
L-Isoleucine	1	6.69	669
L-Leucine	14	13.39	1,339
L-Lysine HCl (80% active)	0	7.94	636
L-Methionine	11	8.87	887
L-Phenylalanine	27	17.72	1,772
Taurine	1	0.33	33
L-Threonine	1	5.81	581
L-Tryptophan	12	5.49	549
L-Valine	7	9.97	997
Pyridoxal-5-phosphate	0	0.27	20
Alpha-ketoglutaric acid	0	7.69	574

Total grams added	76
Base Formula amount	224
Total Weight	300

<input checked="" type="checkbox"/>	L-5-Hydroxytryptophan	2	1.30	110
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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.

In addition to the above customized amino acid formula, this patient may benefit from further use of single amino acids, as evidenced by profiles other than plasma amino acids. See the category, "Other Indicated Nutrients" on your Supplement Recommendation Summary Page.