Metametrix Clinical Laboratory
3425 Corporate Way
Duluth, GA 30096
770.446.5483 Fax:770.441.2237

*Ordering Physician:*

Metametrix

3425 Corporate Way
Duluth, GA 30096

*Accession Number:* **A1112080002**
*Reference Number:*
*Patient:* Sample Report
*Age:* 49 *Sex:* Female
*Date of Birth:* 02/05/1962
*Date Collected:* 12/7/11
*Date Received:* 12/8/11
*Report Date:* 12/8/11
*Telephone:* (770) 446-4583
*Fax:* (770) 441-2237
*Reprinted:* 1/26/12
*Comment:*

## *0091 Organix™ Comprehensive Profile*

*Methodology: LC/Tandem Mass Spectroscopy, Colorimetric*

### Summary of abnormal results:

| | Findings | Intervention Options | Common Metabolic Association |
|---|---|---|---|
| **Fatty Acid Metabolism** | | | |
| Adipate | High | Carnitine, B2 | Fatty acid oxidation |
| Suberate | Very High | Carnitine, B2 | Fatty acid oxidation |
| **Carbohydrate Metabolism** | | | |
| No Abnormality Found | | | |
| **Energy Production Markers** | | | |
| Cis-Aconitate | High | Arginine, Lipoic Acid | Renal ammonia loading |
| Succinate | High | CoQ10 | ATP production |
| Fumarate | High | CoQ10 | ATP production |
| Hydroxymethylglutarate | Very High | CoQ10 | HMG-CoA reductase inhibition |
| **B-Complex Vitamin Markers** | | | |
| Xanthurenate | Very High | B6 | Impaired Tryptophan metabolism |
| **Methylation Cofactor Markers** | | | |
| No Abnormality Found | | | |
| **Neurotransmitter Metabolism Markers** | | | |
| Vanilmandelate | Very High | Evaluate stress issues | Epi- & Norepinephrine turnover stimulation |
| Homovanillate | Very High | Evaluate stress issues | Dopamine turnover stimulation |
| 5-Hydroxyindoleacetate | Low | 5-HTP | Serotonin turnover inhibition |
| Kynurenate | Very High | B6 | Receptor antagonist |
| **Oxidative Damage and Antioxidant Markers** | | | |
| No Abnormality Found | | | |
| **Detoxification Indicators** | | | |
| 2-Methylhippurate | High | Glycine | Xylene exposure |
| **Bacterial - General** | | | |
| Hippurate | Very 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**

No Abnormality Found

Metametrix Clinical Laboratory
3425 Corporate Way
Duluth, GA 30096
770.446.5483 Fax:770.441.2237

Ordered By:
Robert David PhD

*Accession Number:* **A1112080002**
*Patient:* Sample Report
*Report Date:* 12/8/11
*Reprinted:* 1/26/2012
*Comment:*

## 0091 Organix™ Comprehensive Profile

*Methodology: LC/Tandem Mass Spectroscopy, Colorimetric*

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

Ranges are for ages 13 and over

**Percentile Ranking by Quintile**
1st | 2nd | 3rd | 4th | 5th
20% 40% 60% 80%

**95% Reference Interval**

### NUTRIENT MARKERS

| | Results | | | 95% Reference Interval |
|---|---|---|---|---|
| **Fatty Acid Metabolism** *(Carnitine & B2)* | ug/mg creatinine | | | |
| 1 Adipate | 6.7 | H | 6.2 | <= 11.1 |
| 2 Suberate | 11.1 | H | 2.1 | <= 4.6 |
| 3 Ethylmalonate | 1.7 | | 3.6 | <= 6.3 |
| **Carbohydrate Metabolism** *(B1, B3, Cr, Lipoic Acid, CoQ10)* | | | | |
| 4 Pyruvate | <DL* | | 3.9 | <= 6.4 |
| 5 L-Lactate | 5.4 | | 12.6 | 1.6 - 57.1 |
| 6 β-Hydroxybutyrate | <DL* | | 2.1 | <= 9.9 |
| **Energy Production (Citric Acid Cycle)** *(B comp., CoQ10, Amino acids, Mg)* | | | | |
| 7 Citrate | 320 | | 601 | 56 - 987 |
| 8 Cis-Aconitate | 57 | H | 51 | 18 - 78 |
| 9 Isocitrate | 58 | | 98 | 39 - 143 |
| 10 a-Ketoglutarate | <DL* | | 19.0 | <= 35.0 |
| 11 Succinate | 18.7 | H | 11.6 | <= 20.9 |
| 12 Fumarate | 0.74 | H | 0.59 | <= 1.35 |
| 13 Malate | 0.4 | | 1.4 | <= 3.1 |
| 14 Hydroxymethylglutarate | 5.2 | H | 3.6 | <= 5.1 |

Metametrix Clinical Laboratory
3425 Corporate Way
Duluth, GA 30096
770.446.5483 Fax:770.441.2237

Ordered By:
Robert David PhD

*Accession Number:* **A1112080002**
*Patient:* Sample Report
*Report Date:* 12/8/11
*Reprinted:* 1/26/2012
*Comment:*

## 0091 Organix™ Comprehensive Profile

*Methodology: LC/Tandem Mass Spectroscopy, Colorimetric*

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

Ranges are for ages 13 and over

**Percentile Ranking by Quintile**
1st | 2nd | 3rd | 4th | 5th
20% 40% 60% 80%

| | | Results | | | 95% Reference Interval |
|---|---|---|---|---|---|
| | **B-Complex Vitamin Markers** ***(B1, B2, B3, B5, B6, Biotin)*** | ug/mg creatinine | | | |
| 15 | a-Ketoisovalerate | <DL* | | 0.25 | <= 0.49 |
| 16 | a-Ketoisocaproate | 0.06 | | 0.34 | <= 0.52 |
| 17 | a-Keto-β-Methylvalerate | <DL* | | 0.38 | <= 1.10 |
| 18 | Xanthurenate | 1.05 | H | 0.34 | <= 0.46 |
| 19 | β-Hydroxyisovalerate | 2.8 | | 7.6 | <= 11.5 |
| | **Methylation Cofactor Markers** ***(B12, Folate)*** | | | | |
| 20 | Methylmalonate | 0.6 | | 1.7 | <= 2.3 |
| 21 | Formiminoglutamate | 0.1 | | 1.2 | <= 2.2 |
| | **CELL REGULATION MARKERS** | | | | |
| | **Neurotransmitter Metabolism Markers** ***(Tyrosine, Tryptophan, B6, antioxidants)*** | | | | |
| 22 | Vanilmandelate | 6.9 | H | 1.6 – 3.9 | 1.2 - 5.3 |
| 23 | Homovanillate | 9.1 | H | 1.9 – 5.7 | 1.4 - 7.6 |
| 24 | 5-Hydroxyindoleacetate | 1.9 | L | 2.1 – 5.6 | 1.6 - 9.8 |
| 25 | Kynurenate | 2.1 | H | 1.0 | <= 1.5 |
| 26 | Quinolinate | 1.6 | | 4.0 | <= 5.8 |
| 27 | Picolinate | 3.2 | | 8.0 | 2.8 - 13.5 |
| | **Oxidative Damage and Antioxidant Markers** ***(Vitamin C and other antioxidants)*** | | | | |
| 28 | p-Hydroxyphenyllactate | <DL* | | 0.39 | <= 0.66 |
| 29 | 8-Hydroxy-2-deoxyguanosine ** | 3.1 | | 5.3 | <= 7.6 |

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

Metametrix Clinical Laboratory
3425 Corporate Way
Duluth, GA 30096
770.446.5483 Fax:770.441.2237

Ordered By:
Robert David PhD

*Accession Number:* **A1112080002**
*Patient:* Sample Report
*Report Date:* 12/8/11
*Reprinted:* 1/26/2012
*Comment:*

## 0091 Organix™ Comprehensive Profile

*Methodology: LC/Tandem Mass Spectroscopy, Colorimetric*

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

Ranges are for ages 13 and over

**Percentile Ranking by Quintile**
1st | 2nd | 3rd | 4th | 5th
20% | 40% | 60% | 80%

**95% Reference Interval**

### TOXICANTS AND DETOXIFICATION

| Detoxification Indicators (Arg, NAC, Met, Mg, antioxidants) | Results ug/mg creatinine | | | 95% Reference Interval |
|---|---|---|---|---|
| 30 2-Methylhippurate | 0.099 | H | 0.084 | <= 0.192 |
| 31 Orotate | 0.10 | | 0.69 | <= 1.01 |
| 32 Glucarate | 3.3 | | 6.3 | <= 10.7 |
| 33 a-Hydroxybutyrate | 0.3 | | 0.3 | <= 0.9 |
| 34 Pyroglutamate | 47 | | 59 | 28 - 88 |
| 35 Sulfate | 2,197 | | 958 – 2,347 | 690 - 2,988 |

### COMPOUNDS OF BACTERIAL OR YEAST/FUNGAL ORIGIN

**Bacterial - general**

| | | | | |
|---|---|---|---|---|
| 36 Benzoate | <DL* | | 0.6 | <= 9.3 |
| 37 Hippurate | 1,252 | H | 548 | <= 1,070 |
| 38 Phenylacetate | <DL* | | 0.11 | <= 0.18 |
| 39 Phenylpropionate | <DL* | | | <= 0.06 |
| 40 p-Hydroxybenzoate | 0.1 | | 1.1 | <= 1.8 |
| 41 p-Hydroxyphenylacetate | >200 | H | 19 | <= 34 |
| 42 Indican | 26 | | 64 | <= 90 |
| 43 Tricarballylate | 0.55 | | 0.73 | <= 1.41 |

**L. acidophilus / general bacterial**

| | | | | |
|---|---|---|---|---|
| 44 D-Lactate | 0.6 | | 1.9 | <= 4.3 |

**Clostridial species**

| | | | | |
|---|---|---|---|---|
| 45 3,4-Dihydroxyphenylpropionate | <DL* | | | <= 0.05 |

**Yeast / Fungal**

| | | | | |
|---|---|---|---|---|
| 46 D-Arabinitol | 35 | | 36 | <= 73 |

*Creatinine = 175 mg/dL*

* <DL = less than detection limit

Metametrix Clinical Laboratory
3425 Corporate Way
Duluth, GA 30096
770.446.5483 Fax:770.441.2237

Ordered By:
Robert David PhD

*Accession Number:* **A1112080002**
*Patient:* Sample Report
*Report Date:* 12/8/11
*Reprinted:* 1/26/2012
*Comment:*

# 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.

## 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 | |
|---|---|---|
| **Nutrient** | **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 | 100 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 | 100 mcg |
| Copper | 1 mg | |
| Manganese* | 5 mg | |
| Chromium | 200 mcg | |
| Molybdenum* | 25 mcg | |
| Boron* | 1 mg | |

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

MM02

Metametrix Clinical Laboratory
3425 Corporate Way
Duluth, GA 30096
770.446.5483 Fax:770.441.2237

Ordered By:
Robert David PhD

*Accession Number:* **A1112080002**
*Patient:* Sample Report
*Report Date:* 12/8/11
*Reprinted:* 1/26/2012
*Comment:*

## *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 | low |
|---|---|
| 5-Hydroxytryptophan | 200 mg |
| Arginine | 500 mg |
| Carnitine | 800 mg |
| Coenzyme Q10 | 120 mg |
| Glycine | 1000 mg |
| Need for other antioxidants | Moderate |

· 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.