



# NutriStat

## COMPLETE

Improving Nutritional & Metabolic Health

Dr. TEST DOCTOR  
TEST HEALTH CENTRE

**TEST PATIENT**

**01-Jan-1960      Female**

**LAB ID: 3890014**



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01-Jan-1960 Female

LAB ID : 3890014  
Collection Date : 11-May-2023  
Received Date: 11-May-2023

## Interpretation at a Glance

### Metabolic Summary

FIBRINOGEN  
CHOLESTEROL  
LDL(Atherogenic)  
Mean Particle Size  
GLUCOSE (FASTING)

### Endocrinology Summary

### Mineral/Metals Summary

Copper.  
MERCURY

## Nutritional Guide

| Nutrient                  | Adult Dose Range | Units       | Clinician Notes |
|---------------------------|------------------|-------------|-----------------|
| Vitamin-C                 | 450.0            | mg          |                 |
| Vitamin-B1                | 15.0             | mg          |                 |
| Vitamin-B2                | 17.0             | mg          |                 |
| Vitamin-B3                | 13.0             | mg          |                 |
| Vitamin-B5                | 10.0             | mg          |                 |
| Vitamin-B6                | 5.0              | mg          |                 |
| Vitamin-B12               | 450.0            | ug          |                 |
| Chromium .                | 3.0              | ug          |                 |
| Magnesium .               | 140.0            | mg          |                 |
| Acetyl-L-Carnitine.       | 20.0             | mg          |                 |
| N-Acetylcysteine.         | 5.0              | mg          |                 |
| Glutathione.              | 4.6              | mg          |                 |
| Glycine .                 | 5.0              | mg          |                 |
| Methionine.               | 6.0              | mg          |                 |
| Ornithine.                | 10.0             | mg          |                 |
| Serine.                   | 5.0              | mg          |                 |
| Taurine .                 | 6.0              | mg          |                 |
| Tryptophan.               | 8.0              | mg          |                 |
| Lactobacillus             | 1.0              | billion CFU |                 |
| Probiotics (Multistain)   | 1.0              | billion CFU |                 |
| D-Lactate-free probiotics | 1.0              | billion CFU |                 |

### Disclaimer:

Supplement recommendations are based on the Organic Acid test results. The prescribing health practitioner must take into consideration the age, weight, sex, and pregnancy or lactation state. In addition, consider clinical state, medication regime, associated drug-nutrient depletion and allergies. The doses listed above are considered optimal, based on lab results and do not apply to specific disease conditions where doses may need to be altered. The vitamins, minerals or amino acids listed are elemental quantities. Use clinical discretion when choosing the right salt with the guidance of your compounding health professional. For example, Magnesium may be prescribed as a glycinate for its calming effect or threonate may be used for a Magnesium that crosses the blood-brain-barrier.

#### References:

Laboratory Evaluations for Integrative and Functional Medicine by Richard Lord. J.Alexander Bralley; Textbook of Nutritional Medicine by Alan Gaby.

# TEST PATIENT

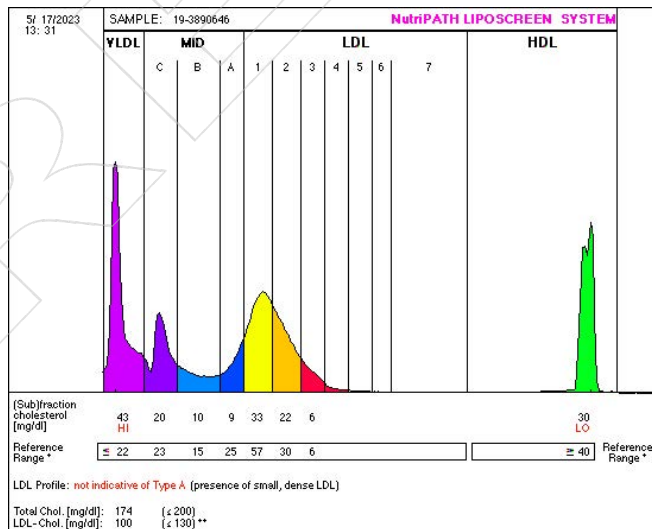
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## Metabolic Health

BLOOD - SERUM

|   | Result                 | Range         | Units    |  |
|---|------------------------|---------------|----------|--|
| <b>Cholesterol:</b>                             | <b>290 *H</b>          | < 200.0       | mg/dl    |  |
| <b>Triglycerides:</b>                           | <b>97</b>              | < 177.0       | mg/dl    |  |
| <b>HDL Cholesterol:</b>                         | <b>58</b>              | 46.3 - 77.2   | mg/dl    |  |
| <b>Non-HDL Cholesterol:</b>                     | <b>232 *H</b>          | 0.0 - 154.0   | mg/dl    |  |
| <b>LDL/HDL Ratio:</b>                           | <b>3.7 *H</b>          | 0.0 - 3.2     | RATIO    |  |
| <b>Lipoprotein (a):</b>                         | <b>34.9</b>            | 0.0 - 34.9    | mg/dl    |  |
| <b>Apolipoprotein-B:</b>                        | <b>100</b>             | 60.0 - 130.0  | mg/dl    |  |
| <b>Apolipoprotein-A1:</b>                       | <b>200</b>             | 110.0 - 205.0 | mg/dl    |  |
| <b>Apolipoprotein-B/A ratio:</b>                | <b>0.5</b>             | 0.4 - 1.1     | RATIO    |  |
| <b>High Sensitive CRP:</b>                      | <b>1.0</b>             | 0.0 - 5.0     | mg/L     |  |
| <b>Fibrinogen:</b>                              | <b>100 *L</b>          | 200.0 - 450.0 | mg/dl    |  |
| <b>Glucose, Fasting</b>                         | <b>108 *H</b>          | 54.1 - 97.3   | mg/dl    |  |
| <b>Very Low Density Lipoprotein (VLDL)</b>      | <b>43.0 *H</b>         | < 22.00       | mg/dl    |  |
| <b>Intermediate Density Lipoprotein (IDL-1)</b> | <b>20.0</b>            | < 23.00       | mg/dl    |  |
| <b>Intermediate Density Lipoprotein (IDL-2)</b> | <b>10.0</b>            | < 15.00       | mg/dl    |  |
| <b>Intermediate Density Lipoprotein (IDL-3)</b> | <b>9.0</b>             | < 25.00       | mg/dl    |  |
| <b>Low Density Lipoprotein (LDL-1)</b>          | <b>33.0</b>            | < 57.00       | mg/dl    |  |
| <b>Low Density Lipoprotein (LDL-2)</b>          | <b>22.0</b>            | < 30.00       | mg/dl    |  |
| <b>Low Density Lipoprotein (LDL-3)</b>          | <b>6.0</b>             | < 6.00        | mg/dl    |  |
| <b>Low Density Lipoprotein (LDL-4)</b>          | <b>&lt;dl</b>          | < 0.10        | mg/dl    |  |
| <b>Low Density Lipoprotein (LDL-5)</b>          | <b>&lt;dl</b>          | < 0.10        | mg/dl    |  |
| <b>Low Density Lipoprotein (LDL-6)</b>          | <b>&lt;dl</b>          | < 0.10        | mg/dl    |  |
| <b>Low Density Lipoprotein (LDL-7)</b>          | <b>&lt;dl</b>          | < 0.10        | mg/dl    |  |
| <b>Mean Particle Size</b>                       | <b>266.0 *L</b>        | > 268.0       | Angstrom |  |
| <b>LDL Phenotype Pattern</b>                    | <b>Type B Abnormal</b> |               |          |  |
| BLOOD - PLASMA                                  |                        |               |          |  |
| <b>Homocysteine:</b>                            | <b>11.0</b>            | 5.0 - 15.0    | nmol/ml  |  |



\*Reference ranges derived from 125 serum samples that met the NCEP ATP III guidelines for desirable lipid status  
 \*\*LDL-C is comprised of the sum of cholesterol in Mid bands C through A as well as all the subfractions

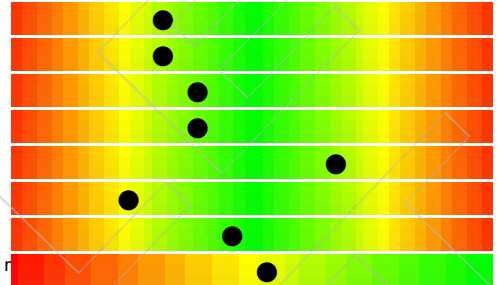
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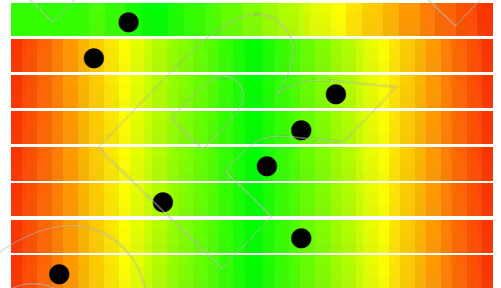
## RENAL FUNCTION TESTS:

|              | Result | Range         | Units           |
|--------------|--------|---------------|-----------------|
| Sodium:      | 137    | 135.0 - 145.0 | mmol/L          |
| Potassium:   | 4.0    | 3.5 - 5.2     | mmol/L          |
| Chloride:    | 101    | 95.0 - 110.0  | mmol/L          |
| Bicarbonate: | 25     | 20.0 - 32.0   | mmol/L          |
| Anion Gap:   | 15     | 8.0 - 16.0    | mmol/L          |
| Urea (BUN):  | 11.2   | 9.8 - 22.4    | mg/dl           |
| Creatinine:  | 0.79   | 0.51 - 1.02   | mg/dl           |
| eGFR:        | 80 *L  | > 90.00       | ml/min/1.73sq m |



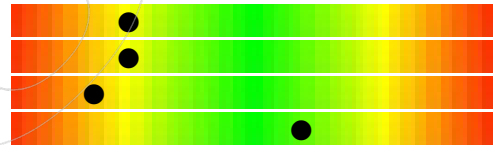
## LIVER FUNCTION TESTS:

|                       | Result | Range        | Units   |
|-----------------------|--------|--------------|---------|
| Bilirubin, Total:     | 0.2    | 0.0 - 1.2    | mg/dl   |
| Alkaline Phosphatase: | 33     | 30.0 - 110.0 | units/L |
| gamma-GT:             | 30     | 5 - 35       | units/L |
| ALT:                  | 28     | 10.0 - 35.0  | units/L |
| AST:                  | 27     | 10.0 - 35.0  | units/L |
| Total Protein:        | 6.6    | 6.0 - 8.0    | g/dL    |
| Albumin:              | 4.4    | 3.3 - 4.8    | g/dL    |
| Globulin:             | 2.2 *L | 2.6 - 3.9    | g/dL    |



## IRON STUDIES:

|                         | Result  | Range         | Units |
|-------------------------|---------|---------------|-------|
| Iron:                   | 39.1    | 27.9 - 168.0  | ug/dL |
| Transferrin:            | 200     | 180.0 - 350.0 | mg/dl |
| Transferrin Saturation: | 14.0 *L | 15.0 - 45.0   | %     |
| Ferritin:               | 220     | 30.0 - 300.0  | ng/mL |



## IRON STUDIES INTERPRETATION TABLE

| CONDITION/SYMPTOM                        | IRON      | TRANSFERRIN SATURATION | FERRITIN             |
|--|-----------|------------------------|----------------------|
| Iron Deficiency                          | Decreased | Decreased              | Decreased            |
| Iron Deficiency and Acute Phase Response | Decreased | Normal or Decreased    | "Normal" < 100 ng/ml |
| Acute Phase Response                     | Decreased | Decreased              | Increased            |
| Iron Overload                            | Increased | Increased              | Increased            |

## VITAMINS

|                  | Result  | Range        | Units |
|------------------|---------|--------------|-------|
| Active B12:      | 54      | 50.6 - 254.0 | pg/mL |
| Folate:          | 5.8     | 3.0 - 16.0   | ng/mL |
| 25-OH Vitamin D: | 25.0 *L | 30.0 - 100.0 | ng/mL |



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## Thyroid Function Health

| BLOOD - SERUM          | Result  | Range       | Units |  |
|------------------------|---------|-------------|-------|--|
| TSH:                   | 3.00    | 0.50 - 5.00 | mU/L  |  |
| FT4:                   | 1.09    | 0.90 - 1.70 | ng/dL |  |
| FT3:                   | 3.4     | 2.0 - 4.4   | pg/mL |  |
| Reverse T3:            | 17.3    | 14.9 - 35.1 | ng/dL |  |
| FT3/RT3 Ratio:         | 19.7 *L | > 20.0      | RATIO |  |
| Anti-Thyroglobulin Ab: | 74.0    | 0.0 - 115.0 | IU/L  |  |
| Thyroid Peroxidase Ab: | 33.0    | 0.0 - 35.0  | IU/L  |  |
| TSH Receptor Ab:       | 1.2     | 0.0 - 1.8   | IU/L  |  |

## Hormone Health

|                                   |     |              |        |  |
|-----------------------------------|-----|--------------|--------|--|
| Progesterone:                     | 0.6 |              | ng/mL  |  |
| DHEAS:                            | 52  | 10.0 - 246.0 | ug/dL  |  |
| Testosterone, Total:              | 0.3 | 0.0 - 0.4    | ng/mL  |  |
| Sex Horm Binding Globulin (SHBG): | 30  | 27.0 - 128.0 | nmol/L |  |
| Testosterone, Free:               | 5.4 | 0.3 - 6.3    | pg/mL  |  |
| Estradiol (E2):                   | 6.5 |              | pg/mL  |  |

|                      | PROGESTERONE | ESTRADIOL    |
|----------------------|--------------|--------------|
|                      | ng/ml        | pg/ml        |
| Follicular phase     | 0.05 - 0.194 | 31 - 90.3    |
| Ovulation phase      | 0.055 - 4.15 | 60.4 - 533   |
| Luteal phase         | 4.12 - 14.56 | 60.4 - 232   |
| Post -menopause      | 0.05 - 0.126 | 5.0 - 137    |
| Pregnant - 1st Trim. | 11.0 - 44.3  | 153 - 3237   |
| Pregnant - 2nd Trim. | 25.4 - 83.3  | 1558 - 21243 |
| Pregnant - 3rd Trim. | 58.8 - 214   | 8510 - 29947 |
| Male                 | 0.05 - 0.149 | 11.2 - 43.2  |

**PLEASE NOTE:**

Reference ranges are based on the manufacturer's range. These ranges serve as clinical guidelines. However, each individual is unique and evaluation of hormone status should be within the context of the patient's clinical picture.

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## Mineral Analysis

| BLOOD - Red Cell | Result  | Range          | Units |  |
|------------------|---------|----------------|-------|--|
| Chromium         | 1.20    | 1.00 - 2.00    | ug/L  |  |
| COBALT           | 1.30    | 0.13 - 1.70    | ug/L  |  |
| Iodine           | 17.00   | 15.00 - 160.00 | ug/L  |  |
| MANGANESE        | 9.9     | 9.0 - 33.0     | ug/L  |  |
| Molybdenum       | 1.27    | 0.60 - 2.00    | ug/L  |  |
| Selenium.        | 199.0   | 190.0 - 500.0  | ug/L  |  |
| Vanadium         | 0.44    | 0.10 - 0.50    | ug/L  |  |
| Copper.          | 0.88 *H | 0.52 - 0.80    | mg/L  |  |
| Magnesium.       | 41.0    | 39.0 - 58.0    | mg/L  |  |
| Zinc.            | 9.14    | 8.60 - 14.50   | mg/L  |  |

## Metal Analysis

| BLOOD - WHOLE | Result  | Range        | Units |  |
|---------------|---------|--------------|-------|--|
| ALUMINIUM     | 0.00    | 0.00 - 30.00 | ug/L  |  |
| Antimony      | 2.00    | 0.00 - 3.50  | ug/L  |  |
| ARSENIC       | 0.00    | 0.00 - 10.00 | ug/L  |  |
| BERYLLIUM     | 0.00    | 0.00 - 4.00  | ug/L  |  |
| Bismuth       | 0.00    | 0.00 - 1.00  | ug/L  |  |
| CADMIUM       | 0.00    | 0.00 - 1.10  | ug/L  |  |
| LEAD          | 0.00    | 0.00 - 90.00 | ug/L  |  |
| MERCURY       | 3.60 *H | 0.00 - 2.00  | ug/L  |  |
| NICKEL        | 0.00    | 0.00 - 2.00  | ug/L  |  |
| Platinum      | 0.00    | 0.00 - 0.40  | ug/L  |  |
| Silver        | 0.00    | 0.00 - 2.00  | ug/L  |  |
| Thallium      | 0.00    | 0.00 - 0.60  | ug/L  |  |
| Tin           | 0.00    | 0.00 - 1.30  | ug/L  |  |
| Uranium       | 0.00    | 0.00 - 0.10  | ug/L  |  |
| Zirconium     | 0.00    | 0.00 - 3.00  | ug/L  |  |

## CU/ZN & Free Copper Index

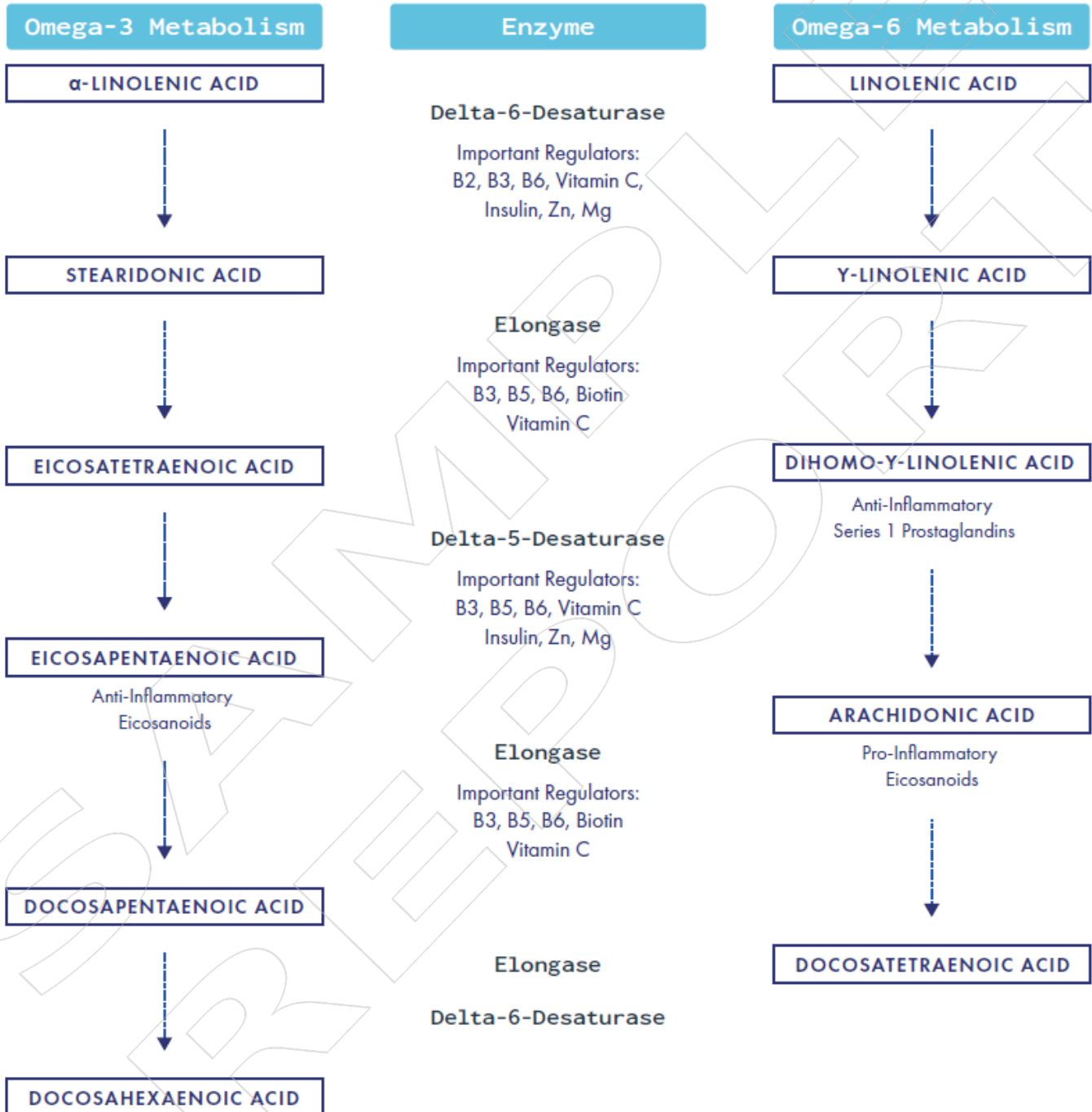
| BLOOD - SERUM      | Result  | Range        | Units |  |
|--------------------|---------|--------------|-------|--|
| Copper:            | 147 *H  | 70.0 - 140.0 | ug/dL |  |
| Zinc, Plasma:      | 65      | 58.0 - 124.0 | ug/dL |  |
| Copper/Zinc Ratio: | 2.3 *H  | 0.8 - 1.0    | RATIO |  |
| Ceruloplasmin:     | 47.0 *H | 16.0 - 45.0  | mg/dl |  |
| % Free Copper:     | 5.5     | < 20.0       | %     |  |

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## Essential Fatty Acid Pathways



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## Essential Fatty Acids

BLOOD - EDTA

### RED CELL FATTY ACID PROFILE

#### Red Cell Fatty Acid Summary

|                                 | Result   | Range         | Units |  |
|---------------------------------|----------|---------------|-------|--|
| Saturated Fats, Total           | 36.34    | 29.89 - 42.10 | %     |  |
| Monounsaturated Fats, Total     | 22.55    | 15.65 - 31.82 | %     |  |
| Omega 3, Total                  | 5.75     | 2.57 - 15.15  | %     |  |
| Omega 6, Total                  | 34.94    | 24.85 - 44.15 | %     |  |
| Omega 3/Omega 6 Ratio           | 0.2 *L   | 0.4 - 0.5     | RATIO |  |
| Omega 6/Omega 3 Ratio           | 6.1      | 1.9 - 14.6    | RATIO |  |
| AA/EPA ratio                    | 9.5      | 1.1 - 69.2    | RATIO |  |
| OMEGA 3 INDEX                   | 5.67     |               | %     |  |
| Delta 6 Desaturase Activity     | 20.5 *H  | 6.0 - 12.3    | RATIO |  |
| <b>Omega 3 Fatty Acids</b>      |          |               |       |  |
| alpha Linolenic Acid            | 0.41     | 0.10 - 1.90   | %     |  |
| Eicosapentanoic Acid            | 0.95     | 0.14 - 6.92   | %     |  |
| Docosapentanoic Acid            | 1.51     | 0.53 - 2.81   | %     |  |
| Docosahexanoic Acid             | 2.88     | 1.00 - 6.50   | %     |  |
| Total Omega 3 Fatty acids       | 5.74     | 2.57 - 15.15  | %     |  |
| <b>Omega 6 Fatty Acids</b>      |          |               |       |  |
| Linoleic Acid                   | 23.36    | 14.00 - 31.30 | %     |  |
| gamma Linolenic Acid            | 0.26     | 0.05 - 0.72   | %     |  |
| Eicosadienoic Acid              | 0.21     | 0.10 - 0.43   | %     |  |
| Dihomo-g-linolenic Acid         | 1.14     | 0.50 - 2.50   | %     |  |
| Arachidonic Acid                | 9.00     | 5.00 - 14.80  | %     |  |
| Docosatetraenoic Acid           | 0.78     | 0.30 - 2.50   | %     |  |
| Docosapentaenoic Acid (n6)      | 0.19     | 0.08 - 0.83   | %     |  |
| Total Omega 6 Fatty Acids       | 34.94    | 24.85 - 44.15 | %     |  |
| <b>Monounsaturated Fats</b>     |          |               |       |  |
| Palmitoleic Acid                | 0.60     | 0.13 - 2.90   | %     |  |
| Oleic Acid                      | 21.09    | 14.20 - 29.50 | %     |  |
| Gondoic Acid                    | 0.23     | 0.10 - 0.77   | %     |  |
| Nervonic Acid                   | 0.63     | 0.13 - 1.96   | %     |  |
| Total Monounsaturated Fats      | 22.55    | 15.65 - 31.82 | %     |  |
| Total Omega 9 Fatty Acids       | 21.95 *H | 16.00 - 20.60 | %     |  |
| <b>Saturated Fatty acids</b>    |          |               |       |  |
| Myristic Acid                   | 0.57     | 0.10 - 2.45   | %     |  |
| Palmitic Acid                   | 20.84    | 17.50 - 27.10 | %     |  |
| Stearic Acid                    | 13.11    | 8.40 - 15.00  | %     |  |
| Arachidic Acid                  | 0.57 *H  | 0.10 - 0.53   | %     |  |
| Behenic Acid                    | 0.62     | 0.20 - 1.59   | %     |  |
| Lignoceric Acid                 | 0.63     | 0.20 - 1.92   | %     |  |
| Total Saturated Fats            | 35.98    | 29.89 - 42.10 | %     |  |
| <b>Trans Fatty Acid Profile</b> |          |               |       |  |
| Trans Palmitoleic Acid          | 0.13     | 0.10 - 2.45   | %     |  |
| Trans Oleic Acid                | 0.41     | 0.00 - 0.51   | %     |  |
| Trans Linoleic Fatty Acid       | 0.27     | 0.07 - 0.92   | %     |  |
| Trans Fatty Acids, Total        | 0.80     | 0.30 - 2.02   | %     |  |
| Trans Fat Index                 | 0.68     | 0.22 - 1.99   | %     |  |



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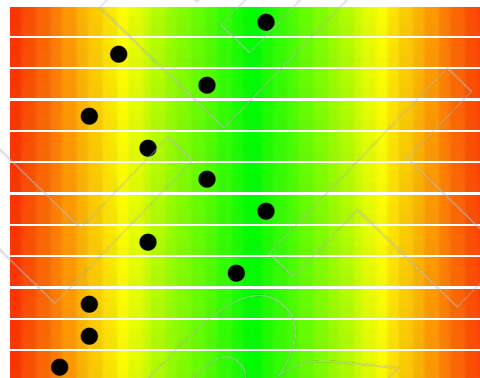
## Amino Acids

BLOOD - LI HEPARI

### AMINO ACIDS, Plasma

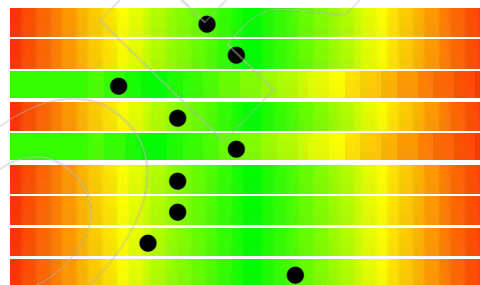
#### Essential Amino Acids

| Amino Acid               | Result  | Range       | Units  |
|--------------------------|---------|-------------|--------|
| Arginine                 | 85.0    | 28.0 - 108  | umol/L |
| Histidine                | 72.1    | 65.0 - 104  | umol/L |
| Isoleucine               | 53.3    | 30.0 - 75.0 | umol/L |
| Leucine                  | 73.4 *L | 77.0 - 155  | umol/L |
| Lysine                   | 134     | 105 - 207   | umol/L |
| Methionine               | 24.0    | 15.0 - 32.0 | umol/L |
| Phenylalanine            | 55.9    | 42.0 - 62.0 | umol/L |
| Taurine                  | 43.3    | 27.0 - 95.0 | umol/L |
| Threonine                | 156     | 75.0 - 197  | umol/L |
| Tryptophane              | 17.0    | 15.0 - 53.0 | umol/L |
| Valine                   | 147 *L  | 150 - 250   | umol/L |
| Total Branched Chain AAs | 273 *L  | 324 - 557   | umol/L |



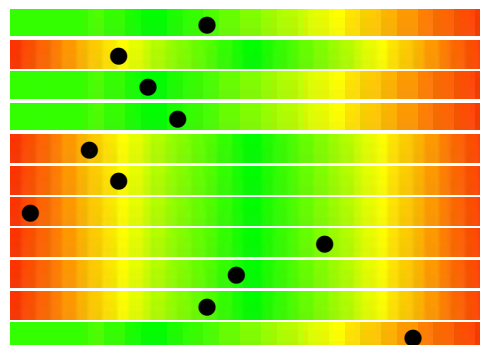
#### Non-Essential Amino Acids

|                                  |       |             |        |
|----------------------------------|-------|-------------|--------|
| Alanine                          | 344   | 218 - 474   | umol/L |
| Asparagine                       | 53.6  | 26.0 - 74.0 | umol/L |
| Aspartate                        | 0.5   | 0.0 - 6.0   | umol/L |
| Cystine                          | 38.0  | 31.0 - 50.0 | umol/L |
| GABA                             | 31.8  | 0.0 - 50.0  | umol/L |
| Glutamic Acid                    | 23.6  | 6.0 - 47.0  | umol/L |
| Glutamine                        | 476   | 340 - 740   | umol/L |
| Proline                          | 126   | 97.0 - 240  | umol/L |
| Tyrosine                         | 70.6  | 26.0 - 80.0 | umol/L |
| Large Neutral Amino Acids (LNAA) | 399.6 |             | umol/L |



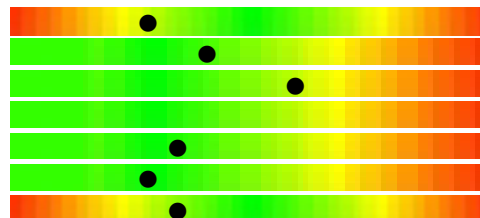
#### Intermediary Metabolites

|                           |         |             |        |
|---------------------------|---------|-------------|--------|
| alpha-Amino adipic Acid   | 3.2     | 0.0 - 6.0   | umol/L |
| alpha-Aminobutyric Acid   | 8.5     | 5.0 - 35.0  | umol/L |
| beta-Aminoisobutyric Acid | 2.5     | 0.0 - 10.0  | umol/L |
| Cystathionine             | 1.0     | 0.0 - 3.0   | umol/L |
| Citrulline                | 9.3 *L  | 10.0 - 55.0 | umol/L |
| Ornithine                 | 47.0    | 36.0 - 96.0 | umol/L |
| Urea                      | 1.0 *L  | 2.8 - 8.1   | mmol/L |
| Glycine                   | 377     | 100 - 384   | umol/L |
| Serine                    | 130     | 70.0 - 175  | umol/L |
| Phosphoserine             | 7.3     | 2.0 - 14.0  | umol/L |
| Sarcosine                 | 38.5 *H | 0.0 - 19.5  | umol/L |



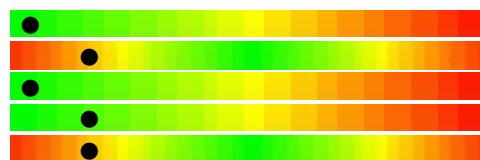
#### Dietary Peptide Related Markers

|                    |      |            |        |
|--------------------|------|------------|--------|
| 1-Methyl Histidine | 12.1 | 1.0 - 42.0 | umol/L |
| 3-Methyl Histidine | 2.5  | 0.0 - 5.0  | umol/L |
| beta-Alanine       | 10.7 | 0.0 - 12.0 | umol/L |
| Anserine           | 0.0  | 0.0 - 43.0 | umol/L |
| Carnosine          | 3.4  | 0.0 - 10.0 | umol/L |
| Hydroxyproline     | 11.4 | 0.0 - 53.0 | umol/L |
| Hydroxylysine      | 3.1  | 2.0 - 5.0  | umol/L |



#### Amino Acid Functional Ratios

|                            |         |             |       |
|----------------------------|---------|-------------|-------|
| Phenylalanine/Tyrosine     | 0.79    | < 2.00      | RATIO |
| Glutamate/Glutamine        | 0.05 *L | 0.06 - 0.23 | RATIO |
| Hydroxyproline/Proline     | 0.09    | < 0.50      | RATIO |
| a-Amino-n-Butyrate/Leucine | 0.12    | < 0.2       | RATIO |
| Tryptophan/LNAA            | 0.04    | 0.04 - 0.10 | RATIO |

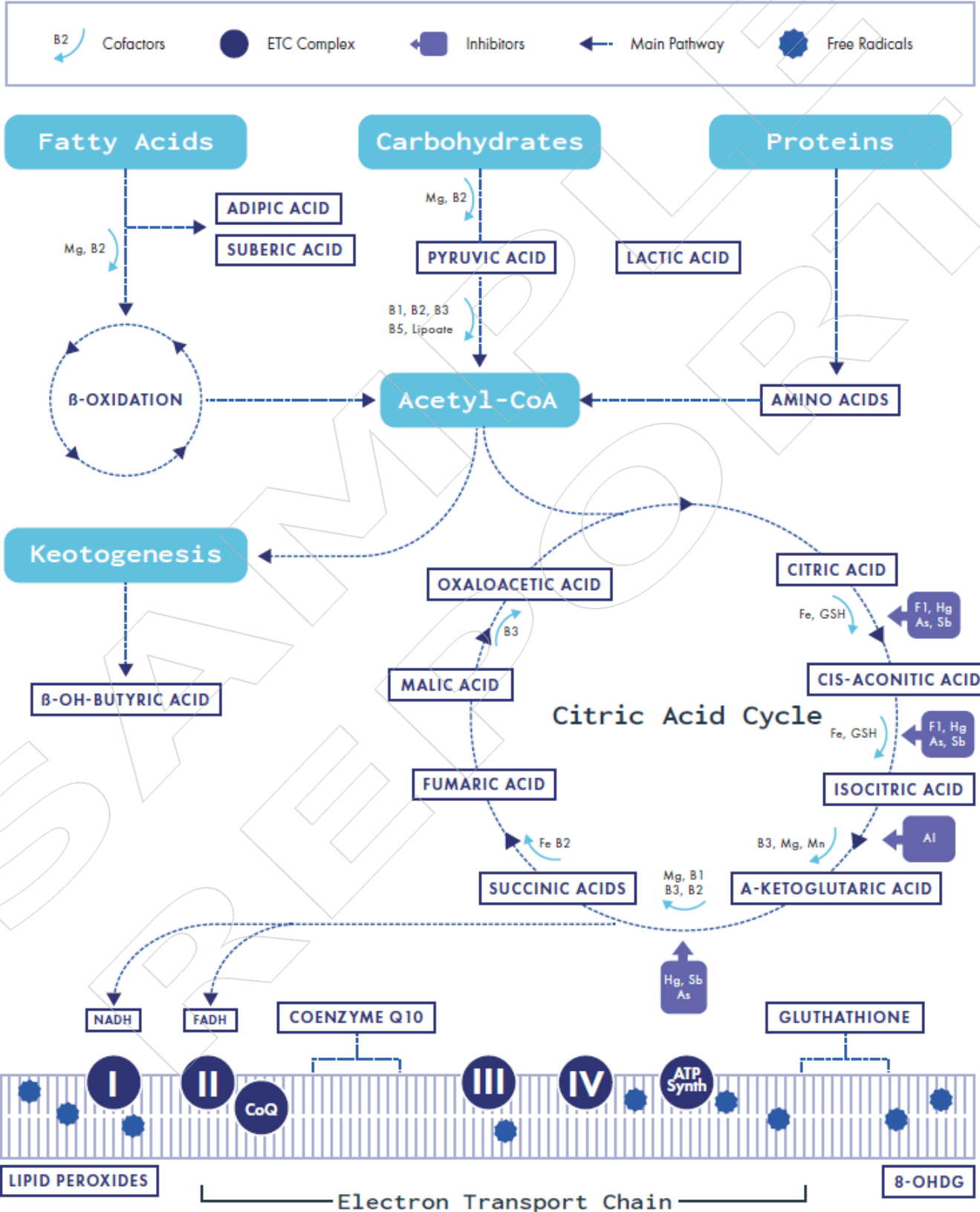


# TEST PATIENT

01-Jan-1960 Female

LAB ID : 3890014  
Collection Date : 11-May-2023  
Received Date: 11-May-2023

## Organic Acid Pathways



# TEST PATIENT

01-Jan-1960 Female

LAB ID : 3890014  
Collection Date : 11-May-2023  
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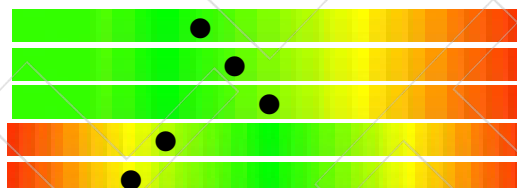
## Nutrient Markers

URINE, SPOT

### KETONE/FATTY ACID Metabolites

(Carnitine & B2)

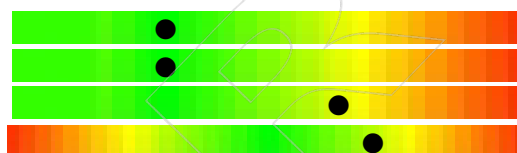
|                         |      |                     |
|-------------------------|------|---------------------|
| 1. Adipic Acid.         | 3.60 | 0.00 - 11.10ug/mgCR |
| 2. Suberic Acid.        | 2.10 | 0.00 - 4.60 ug/mgCR |
| 3. Ethylmalonic Acid    | 4.10 | 0.00 - 6.30 ug/mgCR |
| 4. Pimelic Acid         | 12.0 | 5.9 - 31.8 ug/mgCR  |
| 5. Methyl-Succinic Acid | 5.50 | 3.20 - 21.10ug/mgCR |



### CARBOHYDRATE Metabolism/Glycolysis

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

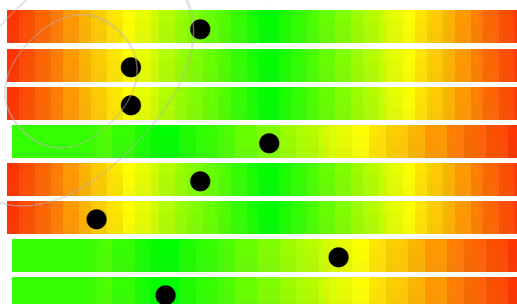
|                      |      |                     |
|----------------------|------|---------------------|
| 6. Pyruvic Acid.     | 1.60 | 0.00 - 6.40 ug/mgCR |
| 7. Lactic Acid.      | 3.50 | 0.00 - 16.40ug/mgCR |
| 8. b-OH-Butyric Acid | 8.60 | 0.00 - 9.90 ug/mgCR |
| 9. Glucose (OA)      | 1.1  | 0.3 - 1.1 mmol/L    |



### CITRIC ACID CYCLE Metabolites.

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

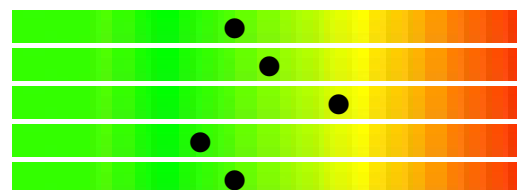
|                                |       |                     |
|--------------------------------|-------|---------------------|
| 10. Citric Acid.               | 450.0 | 56.0 - 987.0ug/mgCR |
| 11. cis-Aconitic Acid.         | 29.0  | 18.0 - 78.0 ug/mgCR |
| 12. Isocitric Acid.            | 49.0  | 35.0 - 143.0ug/mgCR |
| 13. a-Ketoglutaric Acid.       | 21.00 | 0.00 - 35.00ug/mgCR |
| 14. Succinic Acid              | 9.50  | 1.10 - 20.90ug/mgCR |
| 15. Fumaric Acid.              | 1.10  | 1.10 - 1.35 ug/mgCR |
| 16. Malic Acid.                | 2.90  | 0.00 - 3.10 ug/mgCR |
| 17. b-OH-b-Methylglutaric Acid | 1.20  | 0.00 - 5.10 ug/mgCR |



### B-Complex Vitamins & Amino Acid Markers

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

|                                 |      |                     |
|---------------------------------|------|---------------------|
| 18. a-Ketoisovaleric Acid       | 0.24 | 0.00 - 0.49 ug/mgCR |
| 19. a-Ketoisocaproic Acid       | 0.30 | 0.00 - 0.52 ug/mgCR |
| 20. a-Keto-b-Methylvaleric Acid | 0.95 | 0.00 - 1.10 ug/mgCR |
| 21. Xanthurenic Acid            | 0.2  | 0.0 - 0.5 ug/mgCR   |
| 22. beta-Hydroxyisovaleric Acid | 5.50 | 0.00 - 11.50ug/mgCR |



### METHYLATION COFACTORS

(B12, Folate)

|                               |         |                     |
|-------------------------------|---------|---------------------|
| 23. Methylmalonic Acid.       | 2.90 *H | 0.00 - 2.30 ug/mgCR |
| 24. Formiminoglutamic Acid ** | 1.4     | 0.0 - 2.2 ug/mgCR   |

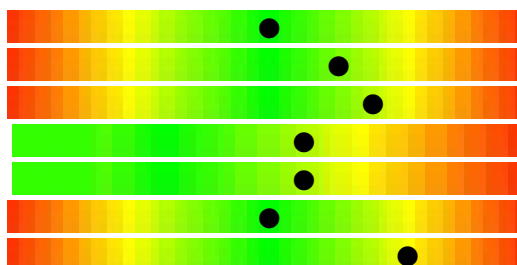


## Cell Regulation Markers

### NEUROTRANSMITTER METABOLISM

(Tyrosine, Tryptophan, B6, Antioxidants)

|  |        |                     |
|--|--------|---------------------|
| 25. Homovanillic Acid (HVA)            | 5.00   | 1.40 - 7.60 ug/mgCR |
| 26. Vanillylmandelic Acid (VMA)        | 4.60   | 1.20 - 5.30 ug/mgCR |
| 27. 5-Hydroxyindoleacetic Acid (5HIAA) | 9.60   | 1.60 - 9.80 ug/mgCR |
| 28. Kynurenic Acid.                    | 1.1    | 0.0 - 1.5 ug/mgCR   |
| 29. Quinolinic Acid (OA)               | 4.70   | 0.00 - 5.80 ug/mgCR |
| 30. Picolinic Acid                     | 10.0   | 2.8 - 13.5 ug/mgCR  |
| 31. Cortisol (OA)                      | 555 *H | 166 - 507 nmol/L    |



Methodology: Liquid Chromatography with tandem mass spectrometry (LC-MS-MS).

# TEST PATIENT

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## Oxidative Damage/AntiOxidant Markers

(Vitamin C and Other Antioxidants)

|     |                          |      |             |         |  |
|-----|--------------------------|------|-------------|---------|--|
| 32. | ParaHydroxyphenyllactate | 0.57 | 0.00 - 0.66 | ug/mgCR |  |
| 33. | 8 OH-deoxyguanosine      | 3.8  | 0.0 - 7.6   | ug/mgCR |  |

## Toxicants and Detoxification

### DETOXIFICATION INDICATORS

(Arg, NAC, Met, Mg, Antioxidants)

|     |                       |       |               |         |  |
|-----|-----------------------|-------|---------------|---------|--|
| 34. | 2-Methylhippuric Acid | <dl   | 0.00 - 0.19   | ug/mgCR |  |
| 35. | Orotic Acid.          | 0.96  | 0.00 - 1.01   | ug/mgCR |  |
| 36. | Glucaric Acid.        | 5.6   | 0.0 - 10.7    | ug/mgCR |  |
| 37. | a-OH-Butyric Acid     | 0.77  | 0.00 - 0.90   | ug/mgCR |  |
| 38. | Pyroglutamic Acid.    | 33.00 | 28.00 - 88.00 | g/mgCR  |  |

## Compounds of Bacterial or Yeast/Fungal Origin

### BACTERIAL DYSBIOSIS MARKERS.

|     |                        |          |              |         |  |
|-----|------------------------|----------|--------------|---------|--|
| 39. | Benzoate (OA)          | 18.00 *H | 0.00 - 9.30  | ug/mgCR |  |
| 40. | Hippurate (OA)         | 944      | 0.0 - 1070   | ug/mgCR |  |
| 41. | Phenylacetate          | 5.6 *H   | 0.0 - 0.2    | ug/mgCR |  |
| 42. | Phenylpropionate       | 2.3 *H   | 0.0 - 0.1    | ug/mgCR |  |
| 43. | ParaHydroxyBenzoate    | 3.5 *H   | 0.0 - 1.8    | ug/mgCR |  |
| 44. | p-HydroxyPhenylacetate | 24.0     | 0.0 - 34.0   | ug/mgCR |  |
| 45. | Indoleacetic Acid      | 57.00    | 0.00 - 90.00 | ug/mgCR |  |
| 46. | Tricarballylate        | 0.95     | 0.00 - 1.41  | ug/mgCR |  |

### L. acidophilus/General Bacteria

|     |           |     |           |         |  |
|-----|-----------|-----|-----------|---------|--|
| 47. | D-Lactate | 0.9 | 0.0 - 4.1 | ug/mgCR |  |
|-----|-----------|-----|-----------|---------|--|

### CLOSTRIDIAL SPECIES

|     |                               |        |             |         |  |
|-----|-------------------------------|--------|-------------|---------|--|
| 48. | Dihydroxyphenylpropionic Acid | 0.1 *H | 0.0 - 0.1   | ug/mgCR |  |
| 49. | 4-Cresol                      | 11.0   | 0.0 - 75.0  | ug/mgCR |  |
| 50. | 3-OH-Propionic Acid           | 2.0    | 0.0 - 208.0 | ug/mgCR |  |

### YEAST/FUNGAL DYSBIOSIS MARKERS.

|     |                 |     |            |         |  |
|-----|-----------------|-----|------------|---------|--|
| 51. | Arabinitol      | 5.0 | 0.0 - 73.0 | ug/mgCR |  |
| 52. | Citramalic Acid | 3.1 | 0.0 - 3.6  | ug/mgCR |  |
| 53. | Tartaric Acid.  | 4.0 | 0.0 - 7.0  | ug/mgCR |  |

## Oxalate Metabolites

|     |               |      |              |         |  |
|-----|---------------|------|--------------|---------|--|
| 54. | Oxalic Acid   | 5.60 | 0.77 - 7.00  | ug/mgCR |  |
| 55. | Glyceric Acid | 21.0 | 16.0 - 117.0 | ug/mgCR |  |
| 56. | Glycolic Acid | 14.0 | 6.8 - 101.0  | ug/mgCR |  |

## Nutritional Markers

|     |                           |        |              |         |  |
|-----|---------------------------|--------|--------------|---------|--|
| 57. | Pyridoxic Acid (Vit B6)   | 5.0    | 0.0 - 34.0   | ug/mgCR |  |
| 58. | Pantothenic Acid (Vit B5) | 6.0    | 0.0 - 10.0   | ug/mgCR |  |
| 59. | Glutaric Acid (Vit B2) ** | 0.2    | 0.0 - 0.4    | ug/mgCR |  |
| 60. | Ascorbic Acid (Vit C)     | 9.0 *L | 10.0 - 200   | ug/mgCR |  |
| 61. | CoEnzyme-Q10 (CoQ10) **   | 15.00  | 0.17 - 39.00 | ug/mgCR |  |
| 62. | N-Acetylcysteine (NAC)    | 0.14   | 0.00 - 0.28  | ug/mgCR |  |
| 63. | Biotin (Vit H)            | 2.10   | 0.19 - 2.70  | ug/mgCR |  |

|                         |     |            |        |  |
|-------------------------|-----|------------|--------|--|
| Creatinine, Urine Spot. | 8.0 | 5.0 - 11.0 | mmol/L |  |
|-------------------------|-----|------------|--------|--|

Results reported as <dl = Less than detectable limit \*\* A high value for this marker may indicate a deficiency of this vitamin

**Methodology:** Liquid Chromatography with tandem mass spectrometry (LC-MS-MS).