



PATIENT: XXXXXXXXXXXXXXXXXXXX

TEST REF: TST-NL-XXXX

TEST NUMBER: T-NL-XXXXX (XXXXXXXXXX)

COLLECTED: XX/XX/XXXX

PRACTITIONER:

GENDER: XYZ

RECEIVED: XX/XX/XXXX

XXXXXXXXXXXXXXXXXX

AGE: XX

TESTED: XX/XX/XXXX

XXXXXXXXXXXXXXXXXXXX

TEST NAME: Organix Comprehensive

Organix® #3301 - Urine

Methodology: GCMS, LC/MS/MS, Alkaline Picrate, Colorimetric

| Summary of Abnormal Findings | | |
|-------------------------------------|-----------------|-----------------------|
| Biomarkers | Findings | Metabolic Pathway |
| Fatty Acid Metabolism | | |
| Adipate | H | Fatty acid oxidation |
| Suberate | H | Fatty acid oxidation |
| Carbohydrate Metabolism | | |
| Pyruvate | Borderline High | Glycolysis |
| b-Hydroxybutyrate | H | Ketone production |
| Energy Production Markers | | |
| Citrate | Borderline High | Citric acid cycle |
| Cis-Aconitate | Borderline High | Citric acid cycle |
| Isocitrate | H | Citric acid cycle |
| a-Ketoglutarate | Borderline High | Citric acid cycle |
| Succinate | H | Citric acid cycle |
| Malate | H | Citric acid cycle |
| B-Complex Vitamin Markers | | |
| a-Ketoisovalerate | Borderline High | Amino acid metabolism |
| a-Ketoisocaproate | H | Amino acid metabolism |
| a-Keto-b-Methylvalerate | H | Amino acid metabolism |
| Glutarate | H | Amino acid metabolism |
| Isovalerylglycine | H | Amino acid metabolism |
| b-Hydroxyisovalerate | Borderline High | Amino acid metabolism |
| Methylation Cofactor Markers | | |



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Summary of Abnormal Findings

| Biomarkers | Findings | Metabolic Pathway |
|---|-----------------|---|
| Methylmalonate | H | Amino acid metabolism |
| Neurotransmitter Metabolism Markers | | |
| Vanilmandelate | L | Epinephrine & norepinephrine metabolism |
| Homovanillate | Borderline High | Dopamine metabolism |
| 5-Hydroxyindoleacetate | H | Serotonin metabolism |
| Kynurenate | Borderline High | Tryptophan pathway |
| Oxidative Damage and Antioxidant Markers | | |
| No Abnormality Found | | |
| Detoxification Indicators | | |
| Orotate | L | Urea cycle |
| Pyroglutamate | H | Glutathione pathway |
| a-Hydroxyisobutyrate | H | MTBE exposure |
| Bacterial - General | | |
| Benzoate | H | Gut bacterial metabolism |
| Phenylacetate | H | Gut bacterial metabolism |
| Indoleacetate | H | Gut bacterial metabolism |
| p-Hydroxyphenylacetate | H | Gut bacterial metabolism |
| Clostridial Species | | |
| 3,4-Dihydroxyphenylpropionate | H | Gut bacterial metabolism |
| Yeast/Fungal | | |
| D-Arabinitol | H | Yeast product |
| Citramalate | H | Yeast product |
| Tartrate | H | Yeast product |
| Oxalate Markers | | |
| Glycerate | H | Glyoxylate pathway |

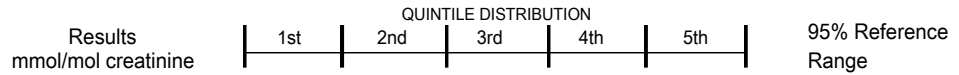
TEST NAME: Organix Comprehensive

Organix® #3301 - Urine

Methodology: GCMS, LC/MS/MS, Alkaline Picrate, Colorimetric

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 | Unit | Quintile Distribution | 95% Reference Range |
|-------------|---------|------|-----------------------|---------------------|
| 1. Adipate | 2.9 | H | 2.3 | <= 2.8 |
| 2. Suberate | 3.0 | H | 1.7 | <= 2.1 |

Carbohydrate Metabolism

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

| Item | Results | Unit | Quintile Distribution | 95% Reference Range |
|----------------------|---------|------|-----------------------|---------------------|
| 3. Pyruvate | 24 | | 20 | 7 - 32 |
| 4. Lactate | 9.9 | | 16.7 | 1.9 - 19.8 |
| 5. β-Hydroxybutyrate | 5.3 | H | 2.2 | <= 2.8 |

Energy Production (Citric Acid Cycle)

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

| Item | Results | Unit | Quintile Distribution | 95% Reference Range |
|----------------------------|---------|------|-----------------------|---------------------|
| 6. Citrate | 400 | | 370 | 40 - 520 |
| 7. Cis-Aconitate | 27 | | 22 | 10 - 36 |
| 8. Isocitrate | 76 | H | 65 | 22 - 65 |
| 9. α-Ketoglutarate | 37 | | 27 | 4 - 52 |
| 10. Succinate | 8.9 | H | 3.4 | 0.4 - 4.6 |
| 11. Malate | 5.0 | H | 3.0 | <= 3.0 |
| 12. Hydroxymethylglutarate | 13 | | 14.0 | <= 15 |

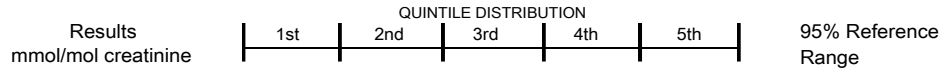
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Nutrient Markers

B-Complex Vitamin Markers

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

| Marker | Results | mmol/mol creatinine | Quintile Distribution | 95% Reference Range |
|-----------------------------|---------|---------------------|-----------------------|---------------------|
| 13. α-Ketoisovalerate | 0.68 | | 0.59 | <= 0.97 |
| 14. α-Ketoisocaproate | 1.08 | H | 0.59 | <= 0.89 |
| 15. α-Keto-β-Methylvalerate | 3.1 | H | 1.5 | <= 2.1 |
| 16. α-Ketoadipate | 1.6 | | 1.0 | <= 1.7 |
| 17. β-Hydroxyisovalerate | 24 | | 20 | <= 29 |
| 18. β-Hydroxypropionate | 9 | | 16 | 5 - 22 |
| 19. Glutarate | 1.35 | H | 0.36 | <= 0.51 |
| 20. Isovalerylglycine | 7.0 | H | 2.4 | <= 3.7 |

Methylation Cofactor Markers

(B12, Folate)

| | | | | |
|------------------------|-----|---|-----|--------|
| 21. Methylmalonate | 2.3 | H | 1.5 | <= 1.9 |
| 22. Formiminoglutamate | <DL | | 1.5 | <= 1.5 |

Cell Regulation Markers

Neurotransmitter Metabolism Markers

(Tyrosine, Tryptophan, B6, Antioxidants)

| | | | | |
|--------------------------------|------|---|------------|-------------|
| 23. Vanilmandelate | <DL | L | 1.0, 2.5 | 0.4 - 3.6 |
| 24. Homovanillate | 5.3 | | 1.7, 3.3 | 1.2 - 5.3 |
| 25. 3-Methyl-4-OH-phenylglycol | 0.13 | | 0.05, 0.17 | 0.02 - 0.22 |
| 26. 5-Hydroxyindoleacetate | 23.4 | H | 4.9, 12.1 | 3.8 - 12.1 |
| 27. Kynurenate | 7.1 | | 6.0 | <= 7.1 |
| 28. Quinolinatate | <DL | | 9.1 | <= 9.1 |
| 29. Kynurenate/Quinolinatate | NR | | 0.72 | >= 0.44 |
| 30. Xanthurenate | 0.62 | | 0.77 | <= 0.96 |

Oxidative Damage and Antioxidant Markers

(Vitamin C and Other Antioxidants)

| | | | | |
|--------------------------------|-----|--|---|-------|
| 31. 8-Hydroxy-2-deoxyguanosine | <DL | | 9 | <= 15 |
|--------------------------------|-----|--|---|-------|

(Units for 8-hydroxy-2-deoxyguanosine are mcg/g creatinine)



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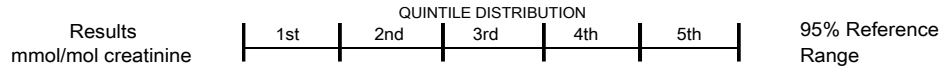
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Ranges: Ages 13 and over



Toxicants and Detoxification

Detoxification Indicators

(Arg, NAC, Met, Mg, Antioxidants)

| Item | Results | mmol/mol creatinine | Value | 95% Reference Range |
|--------------------------|---------|---------------------|-------|---------------------|
| 32. Orotate | <DL | L | 0.64 | 0.33 - 1.01 |
| 33. α-Hydroxybutyrate | <DL | | 0.60 | <= 0.83 |
| 34. Pyroglutamate | 67 | H | 30 | 16 - 34 |
| 35. α-Hydroxyisobutyrate | 11.5 | H | 5.4 | <= 6.7 |
| 36. α-Ketophenylacetate | 0.46 | | 0.30 | <= 0.46 |

Compounds of Bacterial or Yeast/Fungal Origin

Bacterial - General

| | | | | |
|----------------------------|------|---|------|---------|
| 37. Benzoate | 0.16 | H | 0.05 | <= 0.05 |
| 38. Hippurate | 474 | | 329 | <= 603 |
| 39. Phenylacetate | 0.28 | H | 0.08 | <= 0.12 |
| 40. Indoleacetate | 5.2 | H | 2.4 | <= 4.2 |
| 41. p-Hydroxyphenylacetate | 30 | H | 25 | <= 29 |
| 42. m-Hydroxyphenylacetate | 4.0 | | 4.6 | <= 8.1 |

Clostridial Species

| | | | | |
|-----------------------------------|------|---|-----|--------|
| 43. 3,4-Dihydroxyphenylpropionate | 12.8 | H | 2.9 | <= 5.3 |
|-----------------------------------|------|---|-----|--------|

Yeast / Fungal

| | | | | |
|------------------|-----|---|-----|--------|
| 44. D-Arabinitol | 133 | H | 32 | <= 36 |
| 45. Citramalate | 8.0 | H | 3.3 | <= 5.8 |
| 46. Tartarate | 60 | H | 7 | <= 15 |



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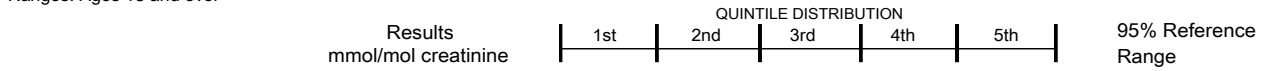
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Oxalate Markers

Oxalates

| Results | mmol/mol creatinine | 1st | 2nd | 3rd | 4th | 5th | 95% Reference Range | |
|---------------|---------------------|--|-----|-----|-----|-----|---------------------|------------|
| 47. Glycerate | 34.8 | [Progressive bar chart showing 13.6 value] | | | | | 13.6 | 3.5 - 16.4 |
| 48. Glycolate | 41 | [Progressive bar chart showing 43 value] | | | | | 43 | <= 67 |
| 49. Oxalate | 61 | [Progressive bar chart showing 40 value] | | | | | 40 | <= 78 |

Creatinine = 1.2 mmol/L

<DL = less than detection limit
 >UL = greater than upper linearity limit
 NR = Not Reportable

Commentary

The performance characteristics of all assays have been verified by Genova Diagnostics, Inc. Unless otherwise noted with ♦, the assay has not been cleared by the U.S. Food and Drug Administration.



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Additional Considerations

These supplement ranges are not adjusted for age 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. Final recommendations should be based on consideration of the patient's medical history and current clinical condition.

Table with 3 columns: Nutrient, Nutrient Need, and Clinician Recommendations. Rows include Vitamin C, Vitamin E, B-vitamins, Biotin, Magnesium, Selenium, Carnitine, Coenzyme Q10, Lipoic Acid, N-Acetylcysteine, L-Arginine, Glycine, and Tyrosine.

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.

Nordic Laboratories Aps

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