Nordic Laboratories

PATIENT: XXXXXXXXXXXXX

TEST NUMBER: G-NL-XXXXX
GENDER: XXXXXX
AGE: XX

COLLECTED: 00-XXX-2023
RECEIVED: 00-XXX-2023
TESTED: 00-XXX-2023

TEST REF: GNL-NL-XXXXX

PRACTITIONER:
XXXXXXXXXXXXX

XXXXXXXXXXXXXXXXXXXXX

TEST NAME: ION-Sample-Report

3102 ION ® Profile - Blood/Urine

Amino Acids 40 Profile - Plasma

Methodology: LC/MS/MS

	Results µmol/dL	QUINTILE DISTRIBUTION (1st 2nd 3rd 4th 5th)	95% Reference Range
Essential Amino Acids			
Limiting Amino Acids			
1. Lysine	25.9	17.9 – 27.9	13.7 - 34.7
2. Methionine	4.7	2.6 – 4.8	2.3 - 6.5
3. Tryptophan	5.49	3.32 – 5.50	2.65 - 6.67
Branched Chain Amino Acids			
4. Isoleucine	6.95	5.69 – 12.68	4.09 - 17.43
5. Leucine	15.8	11.8 – 20.1	9.0 - 25.3
6. Valine	28.3	21.8 – 34.9	18.3 - 42.6
Other Essential Amino Acids			
7. Phenylalanine	9.20	6.93 – 12.05	6.07 - 17.46
8. Histidine	11.0	7.0 – 11.7	6.5 - 13.3
9. Threonine	12.50	7.81 – 12.80	6.42 - 16.32
Conditionally Essential Amino Acids			
10. Arginine	10.6	5.6 – 12.4	4.1 - 17.5
11. Taurine	5.91	5.03 – 8.61	4.41 - 10.99
12. Glycine	8	8 – 18	5 - 23
13. Serine	4.8	2.6 – 6.2	2.1 - 7.0

Nordic Laboratories Aps
Nygade 6, 3.sal • 1164 Copenhagen K • Denmark
Tlf. +45 33 75 10 00

UK Office:
11 Old Factory Buildings • Stonegate • E. Sussex TN5 7DU • UK
Tel: +44 (0)1580 201 687

www.nordic-labs.com
info@nordic-labs.com

Nordic Laboratories

PATIENT: XXXXXXXXXXXXXX
TEST NUMBER: G-NL-XXXXX
GENDER: XXXXXX
AGE: XX

COLLECTED: 00-XXX-2023
RECEIVED: 00-XXX-2023
TESTED: 00-XXX-2023

TEST REF: GNL-NL-XXXXX
PRACTITIONER:
XXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXX

TEST NAME: ION-Sample-Report

Amino Acids 40 Profile - Plasma
Methodology: LC/MS/MS

	Results µmol/dL	QUINTILE DISTRIBUTION (1st 2nd 3rd 4th 5th)	95% Reference Range
Functional Categories			
Vitamin B6 Status Markers			
14. α-aminoadipic acid	0.09	0.16	<= 0.28
15. α-Amino-n-butyric acid (α-ANB)	5.29	5.65	1.76 - 9.99
16. γ-aminobutyric acid (GABA)	<DL	0.04	<= 0.06
17. Cystathionine	0.02	0.06	<= 0.09
Vascular Function			
18. Arginine	10.6	5.6 – 12.4	4.1 - 17.5
19. Taurine	5.91	5.03 – 8.61	4.41 - 10.99
20. α-aminoadipic acid	0.09	0.16	<= 0.28
Neurotransmitters and Precursors			
21. Phenylalanine	9.20	6.93 – 12.05	6.07 - 17.46
22. Tyrosine	9.1	6.8 – 13.1	4.8 - 17.3
23. Tryptophan	5.49	3.32 – 5.50	2.65 - 6.67
24. Glutamic Acid	4.1	2.6 – 10.3	2.0 - 14.5
25. Taurine	5.91	5.03 – 8.61	4.41 - 10.99
Sulfur Amino Acids (Glutathione - related)			
26. Methionine	4.7	2.6 – 4.8	2.3 - 6.5
27. Cystathionine	0.02	0.06	<= 0.09
28. Cyst(e)ine	8.8	6.9 – 15.0	5.9 - 19.9
29. Taurine	5.91	5.03 – 8.61	4.41 - 10.99

Nordic Laboratories Aps
Nygade 6, 3.sal • 1164 Copenhagen K • Denmark
Tlf. +45 33 75 10 00

UK Office:
11 Old Factory Buildings • Stonegate • E. Sussex TN5 7DU • UK
Tel: +44 (0)1580 201 687

www.nordic-labs.com
info@nordic-labs.com

Nordic Laboratories

PATIENT: XXXXXXXXXXXXXX
TEST NUMBER: G-NL-XXXXX
GENDER: XXXXXX
AGE: XX

COLLECTED: 00-XXX-2023
RECEIVED: 00-XXX-2023
TESTED: 00-XXX-2023

TEST REF: GNL-NL-XXXXX
PRACTITIONER:
XXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXX

TEST NAME: ION-Sample-Report

Amino Acids 40 Profile - Plasma
Methodology: LC/MS/MS

	Results µmol/dL	QUINTILE DISTRIBUTION 1st 2nd 3rd 4th 5th	95% Reference Range
Functional Categories			
Urea Cycle and Ammonia Detoxification			
30. Urea	408	359 – 756	216 - 1,156
31. Arginine	10.6	5.6 – 12.4	4.1 - 17.5
32. Citrulline	2.8	2.0 – 4.0	1.6 - 5.7
33. Ornithine	7.76	4.86 – 10.61	4.38 - 15.42
34. Glutamine	62	50 – 87	41 - 111
35. Asparagine	7.8	3.9 – 8.3	3.5 - 11.6
36. Aspartic Acid	<DL	0.60	<= 0.67
Glycine, Serine and Related Amino Acids			
37. Alanine	31	26 – 49	19 - 62
38. Glycine	8	8 – 18	5 - 23
39. Sarcosine	0.08	0.09	<= 0.15
40. Serine	4.8	2.6 – 6.2	2.1 - 7.0
41. Phosphoserine	<DL	0.39	<= 0.39
42. Ethanolamine	0.50	0.55	0.19 - 0.78
43. Phosphoethanolamine	0.17	0.37	0.09 - 0.57
Collagen - Related Amino Acids			
44. Proline	17	17 – 40	11 - 57
45. Lysine	25.9	17.9 – 27.9	13.7 - 34.7

Nordic Laboratories Aps
Nygade 6, 3.sal • 1164 Copenhagen K • Denmark
Tlf. +45 33 75 10 00

UK Office:
11 Old Factory Buildings • Stonegate • E. Sussex TN5 7DU • UK
Tel: +44 (0)1580 201 687

www.nordic-labs.com
info@nordic-labs.com

Nordic Laboratories

PATIENT: XXXXXXXXXXXXX

TEST NUMBER: G-NL-XXXXX
GENDER: XXXXXX
AGE: XX

COLLECTED: 00-XXX-2023
RECEIVED: 00-XXX-2023
TESTED: 00-XXX-2023

TEST REF: GNL-NL-XXXXX

PRACTITIONER:
XXXXXXXXXXXXX

XXXXXXXXXXXXXXXXXXXXX

TEST NAME: ION-Sample-Report

Amino Acids 40 Profile - Plasma

Methodology: LC/MS/MS

	Results µmol/dL	QUINTILE DISTRIBUTION (1st | 2nd | 3rd | 4th | 5th)	95% Reference Range
Functional Categories			
β-Amino Acids and Derivatives			
46. β-Alanine	0.6	0.4	<= 0.7
47. Histidine	11.0	7.0 – 11.7	6.5 - 13.3
48. 1-Methylhistidine	1.15	2.17	<= 3.85
DNA (Thymine) Degradation			
49. β-Aminoisobutyric Acid	0.31	0.41	<= 0.72
Muscle-Specific Amino Acids			
50. 3-Methylhistidine	0.44	0.56	<= 0.78
Ratios			
51. Phenylalanine/Tyrosine	1.01	0.70 – 1.14	0.53 - 1.46
52. Glutamic Acid/Glutamine	0.07	0.14	<= 0.31
53. α-ANB/Leucine	0.33	0.17 – 0.41	0.07 - 0.54
54. Tryptophan/LNAA	0.079	0.050 – 0.075	0.041 - 0.091

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

NR = Not Reportable

Nordic Laboratories Aps
Nygade 6, 3.sal • 1164 Copenhagen K • Denmark
Tlf. +45 33 75 10 00

UK Office:
11 Old Factory Buildings • Stonegate • E. Sussex TN5 7DU • UK
Tel: +44 (0)1580 201 687

www.nordic-labs.com
info@nordic-labs.com

Nordic Laboratories

PATIENT: XXXXXXXXXXXXXX
TEST NUMBER: G-NL-XXXXX
GENDER: XXXXXX
AGE: XX

COLLECTED: 00-XXX-2023
RECEIVED: 00-XXX-2023
TESTED: 00-XXX-2023

TEST REF: GNL-NL-XXXXX
PRACTITIONER:
XXXXXXXXXXXXX

XXXXXXXXXXXXXXXXXXXXX

TEST NAME: ION-Sample-Report

	Results	QUINTILE DISTRIBUTION (1st / 2nd / 3rd / 4th / 5th)	95% Reference Range

Homocysteine Assay - Plasma

Methodology: Enzymatic Assay

				95% Reference Range
1. Homocysteine	11.7	H		3.7 - 10.4 umol/L

Nutrient & Toxic Elements Profile - Blood

Methodology: Inductively Coupled Plasma/Mass Spectrometry

Nutrient Elements

Erythrocytes (packed cells)

				95% Reference Range
1. Potassium	2,745		2,725 – 3,626	2,220 - 3,626 mcg/g
2. Magnesium	51.5		38.5 – 56.5	30.1 - 56.5 mcg/g

Plasma

				95% Reference Range
3. Zinc	96.3		81.5 – 159.4	64.3 - 159.4 mcg/dL
4. Copper	193.1	H	92.9 – 192.0	75.3 - 192.0 mcg/dL

Whole Blood

				95% Reference Range
5. Selenium	122		134 – 330	109 - 330 mcg/L
6. Manganese	4.8		5.5 – 16.5	3.0 - 16.5 mcg/L

Toxic Elements

Whole Blood

			95% Reference Range
7. Arsenic	<DL		<= 13.7 mcg/L
8. Cadmium	0.12		<= 1.22 mcg/L
9. Lead	0.49		<= 2.81 mcg/dL
10. Mercury	<DL		<= 4.35 mcg/L

Results for whole blood toxic elements that are within normal limits do not rule out metal accumulation in other tissues.

NR = Not Reportable

Nordic Laboratories Aps
Nygade 6, 3.sal • 1164 Copenhagen K • Denmark
Tlf. +45 33 75 10 00

UK Office:
11 Old Factory Buildings • Stonegate • E. Sussex TN5 7DU • UK
Tel: +44 (0)1580 201 687

www.nordic-labs.com
info@nordic-labs.com

Nordic Laboratories

PATIENT: XXXXXXXXXXXXX			TEST REF: GNL-NL-XXXXX
TEST NUMBER: G-NL-XXXXX	COLLECTED: 00-XXX-2023		PRACTITIONER: XXXXXXXXXXXX
GENDER: XXXXXX	RECEIVED: 00-XXX-2023		
AGE: XX	TESTED: 00-XXX-2023		XXXXXXXXXXXXXXXXXXXXX

TEST NAME: ION-Sample-Report

QUINTILE DISTRIBUTION: 1st | 2nd | 3rd | 4th | 5th — 95% Reference Range

Coenzyme Q10 Plus Vitamins Profile - Serum

Methodology: High-pressure liquid chromatography (HPLC), LC/MS/MS

		Results		95% Reference Range
1.	Coenzyme Q10	1.25		0.43 - 1.49 mcg/mL
2.	alpha-Tocopherol **	10.4		5.9 - 19.4 mg/L
3.	gamma-Tocopherol **	1.7		0.7 - 4.9 mg/L
4.	Vitamin A (Retinol) **	46.1		18.9 - 57.3 mcg/dL
5.	β-Carotene **	12		3 - 91 mcg/dL

**Indicates testing performed at Labcorp Burlington 1447 York Court, Burlington, NC 27215-3361 Lab Director = Sanjai Nagendra, MD CLIA # 34D0655059

Glutathione Assay - Whole Blood

Methodology: Colorimetric

		Results umol/L		95% Reference Range
6.	Glutathione	553	L (873)	>= 669 umol/L

DNA/Oxidative Stress Marker (8-OHdG) Assay - Urine

Methodology: LC/MS/MS, TBARS (thiobarbituric acid reactive substances), Hexokinase/G-6-PDH

		Results		95% Reference Range
7.	Lipid Peroxides	17.8	H (7.0)	<= 10.0 umol/g creatinine
8.	8-Hydroxy-2-deoxyguanosine	7	(9)	<= 15 mcg/g creatinine

Vitamin D Profile - Serum

Methodology: Chemiluminescent

		Results ng/mL		Reference Range
9.	25 - Hydroxyvitamin D ◆	8	L	30-100 ng/mL

Deficiency:	<20 ng/mL
Insufficiency:	20-29 ng/mL
Sufficient:	30-100 ng/mL
Recommended:	50-80 ng/mL
Excessive:	>100 ng/mL

There is no consensus in the literature regarding optimal levels of 25-Hydroxyvitamin D. Higher levels of 25-Hydroxyvitamin D may be concerning in patients with renal failure. Levels below 30 ng/mL are considered insufficient by most medical associations.

Holick MF, et al. *J Clin Endocrinol Metab.* 2011;96(7):1911-1930.
Vitamin D Council: https://www.vitamindcouncil.org/

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

Nordic Laboratories Aps
Nygade 6, 3.sal • 1164 Copenhagen K • Denmark
Tlf. +45 33 75 10 00

UK Office:
11 Old Factory Buildings • Stonegate • E. Sussex TN5 7DU • UK
Tel: +44 (0)1580 201 687

www.nordic-labs.com
info@nordic-labs.com

Nordic Laboratories

PATIENT: XXXXXXXXXXXXXX
TEST NUMBER: G-NL-XXXXX
GENDER: XXXXXX
AGE: XX

COLLECTED: 00-XXX-2023
RECEIVED: 00-XXX-2023
TESTED: 00-XXX-2023

TEST REF: GNL-NL-XXXXX
PRACTITIONER:
XXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXX

TEST NAME: ION-Sample-Report

Fatty Acids Profile - RBC

Methodology: Gas Chromatography/Mass Spectrometry

		Results wt %		QUINTILE DISTRIBUTION (1st 2nd 3rd 4th 5th)	95% Reference Range
Polyunsaturated Omega-3					
1.	Alpha Linolenic (18:3n3)	<DL	L	0.11	>= 0.09
2.	Eicosapentaenoic (20:5n3)	<DL	L	0.22	>= 0.16
3.	Docosapentaenoic (22:5n3)	1.27		1.40	>= 1.14
4.	Docosahexaenoic (22:6n3)	1.9	L	2.7	>= 2.1
5.	Total Omega-3 %	3.2	L	4.4	>= 3.8
Polyunsaturated Omega-6					
6.	Linoleic (18:2n6)	13.0		11.5 – 16.2	10.5 - 16.9
7.	Gamma Linolenic (18:3n6)	0.11		0.04 – 0.10	0.03 - 0.13
8.	Eicosadienoic (20:2n6)	0.35	H	0.24	<= 0.26
9.	Dihomogamma Linolenic (20:3n6)	2.74		1.22	>= 1.19
10.	Arachidonic (20:4n6)	17		16 – 20	15 - 21
11.	Docosatetraenoic (22:4n6)	3.43		2.00 – 3.82	1.50 - 4.20
12.	Total Omega-6 %	37.1		33.5 – 38.6	30.5 - 39.7
Monounsaturated					
13.	Palmitoleic (16:1n7)	0.49		0.54	<= 0.64
14.	Vaccenic (18:1n7)	1.29	H	1.10	<= 1.13
15.	Oleic (18:1n9)	14	H	11 – 13	10 - 13
16.	Nervonic (24:1n9)	3.6	H	2.3 – 3.3	2.1 - 3.5
17.	Total Omega-9 %	17.6	H	14.1 – 16.1	13.3 - 16.6

Nordic Laboratories Aps
Nygade 6, 3.sal • 1164 Copenhagen K • Denmark
Tlf. +45 33 75 10 00

UK Office:
11 Old Factory Buildings • Stonegate • E. Sussex TN5 7DU • UK
Tel: +44 (0)1580 201 687

www.nordic-labs.com
info@nordic-labs.com

Nordic Laboratories

PATIENT: XXXXXXXXXXXXXX
TEST NUMBER: G-NL-XXXXX
GENDER: XXXXXX
AGE: XX

COLLECTED: 00-XXX-2023
RECEIVED: 00-XXX-2023
TESTED: 00-XXX-2023

TEST REF: GNL-NL-XXXXX
PRACTITIONER:
XXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXX

TEST NAME: ION-Sample-Report

Fatty Acids Profile - RBC

Methodology: Gas Chromatography/Mass Spectrometry

		Results wt %		QUINTILE DISTRIBUTION (1st 2nd 3rd 4th 5th)	95% Reference Range
Saturated					
18.	Palmitic (16:0)	20		19 – 22	18 - 23
19.	Stearic (18:0)	16		15 – 17	14 - 17
20.	Arachidic (20:0)	0.22		0.24 – 0.33	0.22 - 0.35
21.	Behenic (22:0)	0.80	L	1.01 – 1.51	0.92 - 1.68
22.	Lignoceric (24:0)	2.6		2.5 – 3.5	2.1 - 3.8
23.	Total Saturated Fat %	40.2		40.3 – 42.9	39.8 - 43.6
Odd Chain					
24.	Pentadecanoic (15:0)	0.03	L	0.13	0.07 - 0.15
25.	Heptadecanoic (17:0)	0.19	L	0.33	0.22 - 0.37
26.	Tricosanoic (23:0)	0.07	L	0.16	0.12 - 0.18
Trans					
27.	Elaidic (18:1)	0.23		0.45	<= 0.59
Ratios					
28.	LA/DGLA	4.8	L	6.0 – 10.2	6.0 - 12.3
29.	AA/EPA	NR		12 – 84	12 - 125
30.	Omega-6/Omega-3	11.7	H	3.9 – 8.8	3.4 - 10.7
31.	Omega-3 Index	1.9	L		>= 4.0
32.	EPA/DGLA	NR		0.4	<= 0.6
33.	Stearic/Oleic	1.14		1.20 – 1.52	1.10 - 1.64

NR = Not Reportable

Nordic Laboratories Aps
Nygade 6, 3.sal • 1164 Copenhagen K • Denmark
Tlf. +45 33 75 10 00

UK Office:
11 Old Factory Buildings • Stonegate • E. Sussex TN5 7DU • UK
Tel: +44 (0)1580 201 687

www.nordic-labs.com
info@nordic-labs.com

Nordic Laboratories

PATIENT: XXXXXXXXXXXXXX
TEST NUMBER: G-NL-XXXXX
GENDER: XXXXXX
AGE: XX

COLLECTED: 00-XXX-2023
RECEIVED: 00-XXX-2023
TESTED: 00-XXX-2023

TEST REF: GNL-NL-XXXXX
PRACTITIONER:
XXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXX

TEST NAME: ION-Sample-Report

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.

	Results mmol/mol creatinine		QUINTILE DISTRIBUTION 1st 2nd 3rd 4th 5th	95% Reference Range
Nutrient Markers				
Fatty Acid Metabolism *(Carnitine & B2)*				
1. Adipate	1.8		2.3	<= 2.8
2. Suberate	1.5		1.7	<= 2.1
Carbohydrate Metabolism *(B1, B3, Cr, Lipoic Acid, CoQ10)*				
3. Pyruvate	31		20	7 - 32
4. Lactate	8.5		16.7	1.9 - 19.8
5. β-Hydroxybutyrate	1.2		2.2	<= 2.8
Energy Production (Citric Acid Cycle) *(B Comp., CoQ10, Amino Acids, Mg)*				
6. Citrate	86		370	40 - 520
7. Cis-Aconitate	13		22	10 - 36
8. Isocitrate	43		65	22 - 65
9. α-Ketoglutarate	30		27	4 - 52
10. Succinate	2.5		3.4	0.4 - 4.6
11. Malate	1.8		3.0	<= 3.0
12. Hydroxymethylglutarate	5		14	<= 15
B-Complex Vitamin Markers *(B1, B2, B3, B5, B6, Biotin)*				
13. α-Ketoisovalerate	0.37		0.59	<= 0.97
14. α-Ketoisocaproate	0.56		0.59	<= 0.89
15. α-Keto-β-Methylvalerate	1.7		1.5	<= 2.1
16. α-Ketoadipate	1.0		1.0	<= 1.7
17. β-Hydroxyisovalerate	63	H	20	<= 29
18. β-Hydroxypropionate	16		16	5 - 22
19. Glutarate	0.35		0.36	<= 0.51
20. Isovalerylglycine	2.4		2.4	<= 3.7

Nordic Laboratories Aps
Nygade 6, 3.sal • 1164 Copenhagen K • Denmark
Tlf. +45 33 75 10 00

UK Office:
11 Old Factory Buildings • Stonegate • E. Sussex TN5 7DU • UK
Tel: +44 (0)1580 201 687

www.nordic-labs.com
info@nordic-labs.com

Nordic Laboratories

PATIENT: XXXXXXXXXXXXXX
TEST NUMBER: G-NL-XXXXX
GENDER: XXXXXX
AGE: XX

COLLECTED: 00-XXX-2023
RECEIVED: 00-XXX-2023
TESTED: 00-XXX-2023

TEST REF: GNL-NL-XXXXX
PRACTITIONER:
XXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXX

TEST NAME: ION-Sample-Report

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.

	Results mmol/mol creatinine		QUINTILE DISTRIBUTION 1st | 2nd | 3rd | 4th | 5th	95% Reference Range
Nutrient Markers				
Methylation Cofactor Markers *(B12, Folate)*				
21. Methylmalonate	1.3		1.5	<= 1.9
22. Formiminoglutamate	1.4		1.5	<= 1.5
Cell Regulation Markers				
Neurotransmitter Metabolism Markers *(Tyrosine, Tryptophan, B6, Antioxidants)*				
23. Vanilmandelate	1.4		1.0 – 2.5	0.4 - 3.6
24. Homovanillate	2.1		1.7 – 3.3	1.2 - 5.3
25. 3-Methyl-4-Hyroxyphenylglycol	0.05		0.05 – 0.17	0.02 - 0.22
26. 5-Hydroxyindoleacetate	14.3	H	4.9 – 12.1	3.8 - 12.1
27. Kynurenate	3.1		6.0	<= 7.1
28. Quinolinate	7.7		9.1	<= 9.1
29. Kynurenate/Quinolinate	0.40	L	0.72	>= 0.44
30. Xanthurenate	0.44		0.77	<= 0.96
Oxidative Damage and Antioxidant Markers *(Vitamin C and Other Antioxidants)*				
31. 8-Hydroxy-2-deoxyguanosine	7		9	<= 15
(Units for 8-hydroxy-2-dexoyguanosine are mcg/g creatinine)				
Toxicants and Detoxification				
Detoxification Indicators *(Arg, NAC, Met, Mg, Antioxidants)*				
32. Orotate	0.50		0.64	0.33 - 1.01
33. α-Hydroxybutyrate	0.44		0.60	<= 0.83
34. Pyroglutamate	28		30	16 - 34
35. α-Hydroxyisobutyrate	7.8	H	5.4	<= 6.7
36. α-Ketophenylacetate	0.24		0.30	<= 0.46

Nordic Laboratories Aps
Nygade 6, 3.sal • 1164 Copenhagen K • Denmark
Tlf. +45 33 75 10 00

UK Office:
11 Old Factory Buildings • Stonegate • E. Sussex TN5 7DU • UK
Tel: +44 (0)1580 201 687

www.nordic-labs.com
info@nordic-labs.com

Nordic Laboratories

PATIENT: XXXXXXXXXXXXX
TEST NUMBER: G-NL-XXXXX
GENDER: XXXXXX
AGE: XX

COLLECTED: 00-XXX-2023
RECEIVED: 00-XXX-2023
TESTED: 00-XXX-2023

TEST REF: GNL-NL-XXXXX
PRACTITIONER:
XXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXX

TEST NAME: ION-Sample-Report

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.

	Results mmol/mol creatinine		QUINTILE DISTRIBUTION 1st 2nd 3rd 4th 5th	95% Reference Range
Compounds of Bacterial or Yeast/Fungal Origin				
Bacterial - General				
37. Benzoate	0.06	H	0.05	<= 0.05
38. Hippurate	<DL		329	<= 603
39. Phenylacetate	0.35	H	0.08	<= 0.12
40. Indoleacetate	4.8	H	2.4	<= 4.2
41. p-Hydroxyphenylacetate	36	H	25	<= 29
42. m-Hydroxyphenylacetate	0.8		4.6	<= 8.1
Clostridial Species				
43. 3,4-Dihydroxyphenylpropionate	<DL		2.9	<= 5.3
Yeast / Fungal				
44. D-Arabinitol	42	H	32	<= 36
45. Citramalate	2.5		3.3	<= 5.8
46. Tartarate	<DL		7	<= 15
Oxalate Markers				
Oxalates				
47. Glycerate	11.5		13.6	3.5 - 16.4
48. Glycolate	51		43	<= 67
49. Oxalate	10		40	<= 78
Creatinine				
	Results mmol/L			
50. Creatinine ◆	5.4			3.1 - 19.5

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

Nordic Laboratories Aps
Nygade 6, 3.sal • 1164 Copenhagen K • Denmark
Tlf. +45 33 75 10 00

UK Office:
11 Old Factory Buildings • Stonegate • E. Sussex TN5 7DU • UK
Tel: +44 (0)1580 201 687

www.nordic-labs.com
info@nordic-labs.com

TEST NAME: ION-Sample-Report

3102 ION ® Profile - Blood/Urine

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.

Homocysteine: The reference range for the biomarker Homocysteine is based on the sex-specific 5th to 95th percentile values for men and women (20 to 39 years of age) in the NHANES nutritionally replete cohort. Annals of Internal Medicine 1999; 141 (331-338).

Nordic Laboratories Aps
Nygade 6, 3.sal • 1164 Copenhagen K • Denmark
Tlf. +45 33 75 10 00

UK Office:
11 Old Factory Buildings • Stonegate • E. Sussex TN5 7DU • UK
Tel: +44 (0)1580 201 687

www.nordic-labs.com
info@nordic-labs.com

Nordic Laboratories

PATIENT: XXXXXXXXXXXXX			TEST REF: GNL-NL-XXXXX
TEST NUMBER: G-NL-XXXXX	COLLECTED: 00-XXX-2023		PRACTITIONER: XXXXXXXXXXXX
GENDER: XXXXXX	RECEIVED: 00-XXX-2023		
AGE: XX	TESTED: 00-XXX-2023		XXXXXXXXXXXXXXXXXXXX

TEST NAME: ION-Sample-Report

3102 ION ® Profile - Blood/Urine

ION Analyte Pattern Analysis

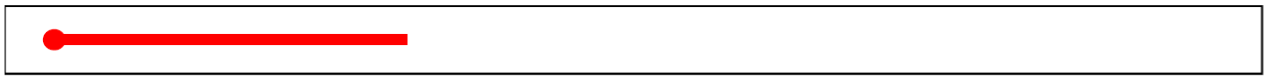
A multi-analyte report can provide greater insight about health risks and special nutrient needs. Patterns of abnormalities can reinforce the degree of significance indicated by a single measurement. Analytes from the various profiles in the ION report are combined below into categories associated with 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 ↑ or ↓ appears when the patient result is outside the fourth quintile of the population.

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 preceeding laboratory results provide the detail upon which these thermometers are based.

Cardiovascular System

Arginine	Homocysteine	8-OHdG*	Magnesium (RBC)
Coenzyme Q10	alpha-Tocopherol **	gamma-Tocopherol **	Lipid Peroxides ↑
AA/EPA			



Low Significance — High Significance

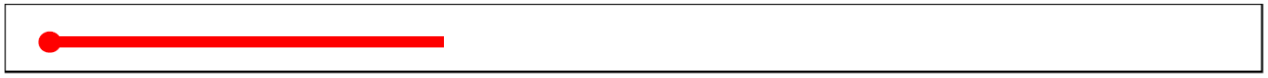
Fatigue

Isoleucine	Leucine	Phenylalanine	Valine
Magnesium (RBC)	Coenzyme Q10	Adipate	Suberate
α-Ketoglutarate ↑	Succinate	Malate	Xanthurenate
Methylmalonate	Formiminoglutamate		

Low Significance — High Significance

Metabolic Syndrome (Syndrome X)

Magnesium (RBC)	Palmitic (16:0)	Stearic (18:0)	α-Hydroxybutyrate
β-Hydroxybutyrate	β-Hydroxyisovalerate ↑		



Low Significance — High Significance

*8-OHdG = 8-Hydroxy-2-deoxyguanosine

**Indicates testing performed at Labcorp Burlington 1447 York Court, Burlington, NC 27215-3361 Lab Directior = Sanjai Nagendra, MD CLIA # 34D0655059

Nordic Laboratories Aps
Nygade 6, 3.sal • 1164 Copenhagen K • Denmark
Tlf. +45 33 75 10 00

UK Office:
11 Old Factory Buildings • Stonegate • E. Sussex TN5 7DU • UK
Tel: +44 (0)1580 201 687

www.nordic-labs.com
info@nordic-labs.com

Nordic Laboratories

PATIENT: XXXXXXXXXXXXX
TEST NUMBER: G-NL-XXXXX
GENDER: XXXXXX
AGE: XX

COLLECTED: 00-XXX-2023
RECEIVED: 00-XXX-2023
TESTED: 00-XXX-2023

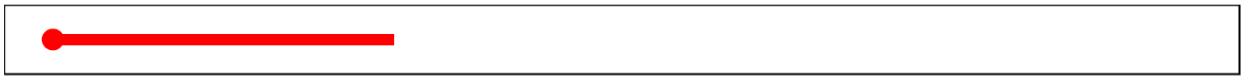
TEST REF: GNL-NL-XXXXX
PRACTITIONER:
XXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXX

TEST NAME: ION-Sample-Report

3102 ION ® Profile - Blood/Urine

Mental/Emotional

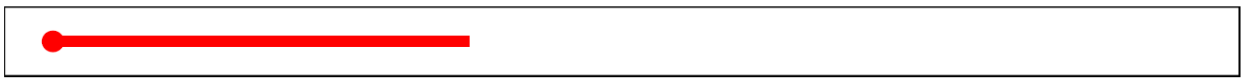
Tryptophan	Tyrosine	Magnesium (RBC)	Eicosapentanoic ↓
Docosahexaenoic ↓	Xanthurenate	Methylmalonate	Formiminoglutamate
Vanilmandelate	5-Hydroxyindoleacetate ↑		



Low Significance — High Significance

Intestinal/Bacterial Metabolites

Phenylacetate ↑	Lactate	3,4-DHPP*	p-Hydroxyphenylacetate ↑



Low Significance — High Significance

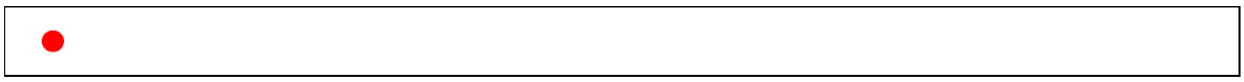
Intestinal Yeasts/Fungal Metabolites

↑

Low Significance — High Significance

Digestion/Absorption

Arginine	Histidine	Isoleucine	Leucine
Lysine	Methionine	Phenylalanine	Threonine
Tryptophan	Valine	Selenium (whole blood) ↓	



Low Significance — High Significance

*3,4-DHPP = 3,4-Dihydroxyphenylpropionate

Nordic Laboratories Aps
Nygade 6, 3.sal • 1164 Copenhagen K • Denmark
Tlf. +45 33 75 10 00

UK Office:
11 Old Factory Buildings • Stonegate • E. Sussex TN5 7DU • UK
Tel: +44 (0)1580 201 687

www.nordic-labs.com
info@nordic-labs.com

Nordic Laboratories

PATIENT: XXXXXXXXXXXXX
TEST NUMBER: G-NL-XXXXX
GENDER: XXXXXX
AGE: XX

COLLECTED: 00-XXX-2023
RECEIVED: 00-XXX-2023
TESTED: 00-XXX-2023

TEST REF: GNL-NL-XXXXX
PRACTITIONER:
XXXXXXXXXXXXX

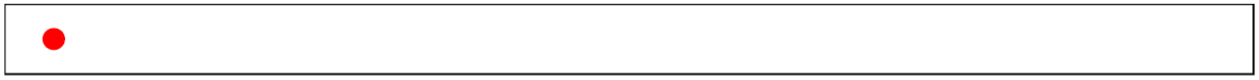
XXXXXXXXXXXXXXXXXXXXX

TEST NAME: ION-Sample-Report

3102 ION ® Profile - Blood/Urine

Toxic Exposure

Arsenic	Cadmium	Lead	Isocitrate
Mercury	Citrate	Quinolinate	Orotate
Cis-Aconitate			



Low Significance — High Significance

Detoxification Impairment

Methionine	Glycine	Serine	Taurine
Glutamine	Pyroglutamate	Benzoate ↑	

Low Significance — High Significance

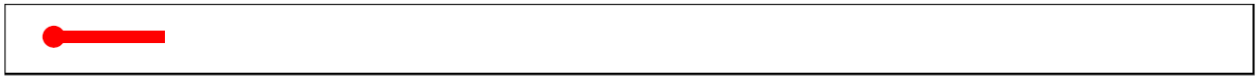
Oxidative Stress/Antioxidant Insufficiency

Taurine	Selenium (whole blood) ↓	Lead	Mercury
alpha-Tocopherol **	gamma-Tocopherol **	Vitamin A (Retinol) **	β-Carotene
Lipid Peroxides ↑	8-OHdG*		

Low Significance — High Significance

Mitochondrial Functional Impairment

Magnesium (RBC)	Coenzyme Q10	Adipate	Suberate
Succinate	Pyruvate ↑	Lactate	α-Hydroxybutyrate
β-Hydroxybutyrate	Malate		



Low Significance — High Significance

*8-OHdG = 8-Hydroxy-2-deoxyguanosine

Nordic Laboratories Aps
Nygade 6, 3.sal • 1164 Copenhagen K • Denmark
Tlf. +45 33 75 10 00

UK Office:
11 Old Factory Buildings • Stonegate • E. Sussex TN5 7DU • UK
Tel: +44 (0)1580 201 687

www.nordic-labs.com
info@nordic-labs.com

Nordic Laboratories

PATIENT: XXXXXXXXXXXXXX
TEST NUMBER: G-NL-XXXXX
GENDER: XXXXXX
AGE: XX

COLLECTED: 00-XXX-2023
RECEIVED: 00-XXX-2023
TESTED: 00-XXX-2023

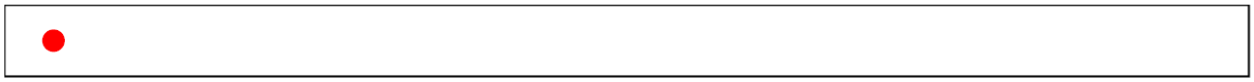
TEST REF: GNL-NL-XXXXX
PRACTITIONER:
XXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXX

TEST NAME: ION-Sample-Report

3102 ION ® Profile - Blood/Urine

Amino Acid Insufficiency

Arginine	Histidine	Isoleucine	Leucine
Lysine	Methionine	Phenylalanine	Threonine
Tryptophan	Valine		



Low Significance — High Significance

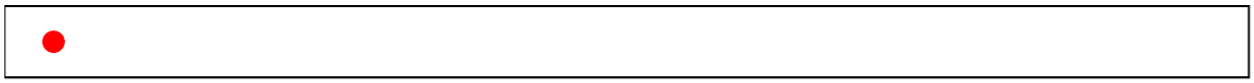
Essential Fatty Acid Insufficiency

Arachidonic	Alpha Linoleic ↓	Eicosapentaenoic ↓	Docosahexaenoic ↓
Linoleic	Gamma Linolenic	Dihomogamma Linolenic	Palmitoleic

Low Significance — High Significance

Disordered Methyl Group (Single Carbon) Transfer

Homocysteine	Pentadecanoic	Heptadecanoic	Kynurenate
Tricosanoic	Xanthurenate	Methylmalonate	Formiminoglutamate



Low Significance — High Significance

Disordered Tryptophan Metabolism

Tryptophan	Xanthurenate	5-Hydroxyindole acetate ↑	Kynurenate
Quinolinate			

Low Significance — High Significance

Nordic Laboratories Aps
Nygade 6, 3.sal • 1164 Copenhagen K • Denmark
Tlf. +45 33 75 10 00

UK Office:
11 Old Factory Buildings • Stonegate • E. Sussex TN5 7DU • UK
Tel: +44 (0)1580 201 687

www.nordic-labs.com
info@nordic-labs.com

TEST NAME: ION-Sample-Report

3102 ION ® Profile - Blood/Urine

Additional Considerations

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.

Nutrient	Nutrient Need	Clinician Recommendations
Vitamin A	Low: 2000-4000 IU	
Vitamin C	Moderate: 500-1000 mg	
Vitamin D	High: 2000-5000 IU	
Vitamin E (mixed tocopherols)	High: 200-400 IU	
Vitamin B-1 (Thiamin)	Optional: 0-25 mg	
Vitamin B-2 (Riboflavin)	Low: 10-25 mg	
Vitamin B-3 (Niacin)	Optional: 0-50 mg	
Vitamin B-5 (Pantothenic Acid)	Optional: 0-25 mg	
Vitamin B-6 (Pyridoxine)	Moderate: 25-50 mg	
Vitamin B-12 (Cobalamin)	Moderate: 250-500 mcg	
Folic Acid	Low: 250-500 mcg	
Biotin	Moderate: 200-500 mcg	
Magnesium	Low: 100-200 mg	
Zinc	Low: 5-10 mg	
Selenium	Optional: 0-150 mcg	
Fish Oil	Moderate: 500-2000 mg	
Coenzyme Q10	Optional: 0-100 mg	
Lipoic Acid	Optional: 0-50 mg	
Need for other antioxidants	Moderate	

Various conditionally essential nurients and other potentially beneficial interventions appear in this section only if relevant abnormalities are present.

Nordic Laboratories Aps
Nygade 6, 3.sal • 1164 Copenhagen K • Denmark
Tlf. +45 33 75 10 00

UK Office:
11 Old Factory Buildings • Stonegate • E. Sussex TN5 7DU • UK
Tel: +44 (0)1580 201 687

www.nordic-labs.com
info@nordic-labs.com