



Procedure	Result	Units	Ref Interval	Accession	Collected	Received	Reported/Verified
Creatinine, Urine	12	mg/dL		19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Alpha-amino butyric acid, Plasma	15	umol/L	[<=40]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Alanine, Plasma	202	umol/L	[160-530]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Allo-isoleucine, Plasma	2	umol/L	[<=5]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Alpha-aminoadipic acid, Plasma	4	umol/L	[<=4]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Anserine, Plasma	5	umol/L	[<=5]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Arginine, Plasma	43	umol/L	[35-125]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Argininosuccinic Acid, Plasma	<2	umol/L	[<=2]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Asparagine, Plasma	29	umol/L	[20-80]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Aspartic Acid, Plasma	10	umol/L	[<=15]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Beta-amino isobutyric acid, Plasma	<5	umol/L	[<=10]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Beta-alanine, Plasma	<25	umol/L	[<=25]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Citrulline, Plasma	33	umol/L	[10-45]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Cystathionine, Plasma	<5	umol/L	[<=5]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Cystine, Plasma	16	umol/L	[10-65]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Ethanolamine, Plasma	8	umol/L	[<=15]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Gamma-amino butyric acid, Plasma	<5	umol/L	[<=5]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Glutamic Acid, Plasma	116	umol/L	[15-130]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Glutamine, Plasma	444	umol/L	[380-680]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Glycine, Plasma	200	umol/L	[140-420]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Histidine, Plasma	75	umol/L	[50-130]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Homocitrulline, Plasma	<5	umol/L	[<=5]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Homocystine, Plasma	<2	umol/L	[<=2]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Hydroxylysine, Plasma	<5	umol/L	[<=5]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Hydroxyproline, Plasma	33	umol/L	[5-40]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Isoleucine, Plasma	111	umol/L	[30-120]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Leucine, Plasma	128	umol/L	[60-180]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Lysine, Plasma	210	umol/L	[85-230]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Methionine, Plasma	22	umol/L	[15-40]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Ornithine, Plasma	89	umol/L	[25-110]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Phenylalanine, Plasma	66	umol/L	[30-82]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Proline, Plasma	92	umol/L	[90-350]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Sarcosine, Plasma	<5	umol/L	[<=5]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Serine, Plasma	88	umol/L	[60-170]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Taurine, Plasma	127	umol/L	[30-130]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Threonine, Plasma	77	umol/L	[60-190]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Tryptophan, Plasma	77	umol/L	[25-80]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Tyrosine, Plasma	87	umol/L	[35-110]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Valine, Plasma	302	umol/L	[120-320]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C2, Acetyl	14.21	umol/L	[3.74-16.56]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C3, Propionyl	0.67	umol/L	[0.00-0.83]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C4, Iso-/Butyryl	0.24	umol/L	[0.00-0.45]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38

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Procedure	Result	Units	Ref Interval	Accession	Collected	Received	Reported/Verified
C5, Isovaleryl/2Mebutyryl	0.22	umol/L	[0.00-0.30]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C5-DC, Glutaryl	0.06	umol/L	[0.00-0.09]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C5-OH, 3-OH Isovaleryl	0.01	umol/L	[0.00-0.07]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C6, Hexanoyl	0.08	umol/L	[0.00-0.12]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C8, Octanoyl	0.20	umol/L	[0.00-0.23]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C8:1, Octenoyl	0.23	umol/L	[0.00-0.61]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C10, Decanoyl	0.16	umol/L	[0.00-0.31]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C10:1, Decenoyl	0.12	umol/L	[0.00-0.31]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C12, Dodecanoyl	0.05	umol/L	[0.00-0.12]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C12:1, Dodecenoyl	0.07	umol/L	[0.00-0.17]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C12-OH, 3-OH-Dodecanoyl	0.02	umol/L	[0.00-0.02]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C14, Tetradecanoyl	0.01	umol/L	[0.00-0.05]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C14:1, Tetradecenoyl	0.04	umol/L	[0.00-0.16]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C14:2, Tetradecadienoyl	0.05	umol/L	[0.00-0.12]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C14-OH, 3-OH-Tetradecanoyl	0.01	umol/L	[0.00-0.02]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C14:1-OH, 3-OH-Tetradecenoyl	0.02	umol/L	[0.00-0.02]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C16, Palmitoyl	0.06	umol/L	[0.00-0.10]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C16:1, Palmitoleyl	0.01	umol/L	[0.00-0.04]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C16-OH, 3-OH-Palmitoyl	0.01	umol/L	[0.00-0.01]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C16:1-OH, 3-OH-Palmitoleyl	0.01	umol/L	[0.00-0.01]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C18, Stearoyl	0.02	umol/L	[0.00-0.04]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C18:1, Oleyl	0.13	umol/L	[0.00-0.17]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C18:2, Linoleyl	0.03	umol/L	[0.00-0.10]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C18-OH, 3-OH-Stearoyl	0.01	umol/L	[0.00-0.01]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C18:1-OH, 3-OH-Oleyl	0.01	umol/L	[0.00-0.01]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
C18:2-OH, 3-OH-Linoleyl	0.01	umol/L	[0.00-0.01]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Mucopolysaccharides mg/mmol CRT	3.3		[0.0-7.1]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Lactic Acid, Urine	47		[0-50]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Pyruvic Acid, Urine	8		[0-15]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Succinic Acid, Urine	12		[0-20]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Fumaric Acid, Urine	1		[0-4]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
2-Ketoglutaric Acid, Urine	69		[0-75]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Methylmalonic Acid, Urine	1		[0-5]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
3-OH-Butyric Acid, Urine	1		[0-4]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Acetoacetic Acid, Urine	2		[0-4]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
2-Keto-3-methylvaleric Acid, Urine	5		[0-10]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
2-Ketoisocaproic Acid, Urine	1		[0-4]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
2-Ketoisovaleric Acid, Urine	3		[0-4]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Ethylmalonic Acid, Urine	1		[0-4]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Adipic Acid, Urine	23		[0-35]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Suberic Acid, Urine	2		[0-3]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Sebacic Acid, Urine	2		[0-3]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38

* Abnormal, # = Corrected, C = Critical, f = Footnote, H = High, L = Low, t = Interpretive Text, @ = Reference Lab



Procedure	Result	Units	Ref Interval	Accession	Collected	Received	Reported/Verified
4-OH-phenylacetic Acid, Urine	21		[0-25]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
4-OH-phenyllactic Acid, Urine	1		[0-4]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
4-OH-phenylpyruvic Acid, Urine	1		[0-2]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Succinylacetone, Urine	Not Detected		[0-0]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Creatine, Urine	317	mmol/mol CRT	[10-370]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Guanidinoacetic acid, Urine	10	mmol/mol CRT	[7-130]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Creatinine, Urine	1090.0	umol/L		19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Creatine, Serum/Plasma	53.8	umol/L	[9.0-90.0]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Guanidinoacetic acid, Serum/Plasma	1.67	umol/L	[1.10-3.80]	19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38
Autism/Intellectual Disability Interp	See Note f			19-344-900162	10-Dec-19 13:35:00	11-Dec-19 12:44:00	11-Dec-19 12:59:38

10-Dec-19 13:35:00 Autism/Intellectual Disability Interp:
 No metabolic abnormalities identifiable by this panel were detected. Genetic evaluation is recommended to assess the need for additional testing to exclude other rare metabolic disorders associated with autism and/or intellectual disability.

10-Dec-19 13:35:00 Mucopolysaccharides mg/mmol CRT:
 REFERENCE INTERVAL: Mucopolysaccharides mg/mmol CRT

Access complete set of age- and/or gender-specific reference intervals for this test in the ARUP Laboratory Test Directory (aruplab.com).

Test developed and characteristics determined by ARUP Laboratories. See Compliance Statement B: aruplab.com/CS

10-Dec-19 13:35:00 Creatine, Urine:

Test developed and characteristics determined by ARUP Laboratories. See Compliance Statement B: aruplab.com/CS

10-Dec-19 13:35:00 Autism/Intellectual Disability Interp:
 INTERPRETIVE INFORMATION: Autism and Intellectual Disability Metabolic Panel

MPS Screen, Urine: Mucopolysaccharides (Glycosaminoglycans) include: Keratan Sulfate, Heparan Sulfate, Dermatan Sulfate, and Chondroitin Sulfates 4 and 6. The excretion of Heparan Sulfate is variable. A normal mucopolysaccharides screen does not exclude Sanfilippo Syndrome (Mucopolysaccharidosis Type III).

Organic Acids, Urine: Results are reported in mmol/mol creatinine.

Test developed and characteristics determined by ARUP Laboratories. See Compliance Statement B: aruplab.com/CS

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