

Measurement Uncertainty Data Table
 Data Collection: 1 Jan 2023 - 31 Dec 2023

Analyte	Reportable Unit	Mean Conc	%CV	MU %	MU	Mean Conc	%CV	MU %	MU	Mean Conc	%CV	MU %	MU
A													
17-OHP, serum	nmol/L	0.83	4.8	9.3	0.08	4.05	4.6	9.1	0.37	24.3	4.4	8.7	2.11
A1-anti-trypsin, serum	g/L	0.85	1.4	2.8	0.02	1.48	1.6	3.2	0.05	-	-	-	-
ACTH, plasma	pmol/L	6.93	8.3	16.3	1.13	45.6	7.6	15.0	6.84	92.3	7.2	14.1	13.03
Acylcarnitine, serum:													
C2 carnitine	umol/L	5.30	20.6	40.4	2.14	27.5	19.0	37.2	10.24	-	-	-	-
C3 carnitine	umol/L	0.82	4.2	8.2	0.07	1.56	4.8	9.4	0.15	-	-	-	-
C4 carnitine	umol/L	0.43	5.5	10.8	0.05	1.61	5.0	9.8	0.16	-	-	-	-
C5 carnitine	umol/L	0.51	3.8	7.4	0.04	1.65	4.5	8.8	0.15	-	-	-	-
C6 carnitine	umol/L	0.38	4.5	8.8	0.03	1.67	3.4	6.7	0.11	-	-	-	-
C8 carnitine	umol/L	0.57	4.7	9.2	0.05	1.74	3.9	7.6	0.13	-	-	-	-
C10 carnitine	umol/L	0.39	4.6	9.0	0.04	1.80	3.6	7.1	0.13	-	-	-	-
C12 carnitine	umol/L	0.04	27.0	52.9	0.02	0.08	12.6	24.7	0.02	-	-	-	-
C14 carnitine	umol/L	0.02	25.5	50.0	0.01	0.05	11.2	22.0	0.01	-	-	-	-
C16 carnitine	umol/L	0.35	4.4	8.6	0.03	1.66	3.8	7.4	0.12	-	-	-	-
C18 carnitine	umol/L	0.34	7.0	13.7	0.05	1.54	6.2	12.2	0.19	-	-	-	-
Adrenaline, urine (concentration)	nmol/L	23.5	4.9	9.6	2.26	69.4	2.5	5.0	3.44	155	3.8	7.5	11.59
AFP, serum	ug/L	33.1	3.4	6.7	2.22	130	2.7	5.3	6.87	273	2.7	5.3	14.44
Albumin, urine (concentration, first morning)	mg/L	33.9	14.7	28.9	9.80	84.4	9.3	18.2	15.40	-	-	-	-
Albumin, serum	g/L	24.1	2.4	4.7	1.14	40.8	1.8	3.6	1.46	-	-	-	-
Aldosterone, serum	pmol/L	112	7.4	14.4	16.13	532	3.3	6.4	34.23	1047	5.2	10.1	105.85
Aldosterone, urine (concentration)	nmol/L	12.0	5.4	10.5	1.25	24.3	6.0	11.7	2.84	40.8	5.1	10.0	4.07
Alanine aminotransferase, serum	U/L	30.1	4.3	8.4	2.54	90.3	1.9	3.8	3.43	-	-	-	-
Alkaline phosphatase, serum	U/L	112.9	2.1	4.1	4.64	429	1.8	3.6	15.41	-	-	-	-
Aluminium, serum	µmol/L	0.20	23.1	45.3	0.09	1.60	5.0	9.7	0.16	0.80	7.1	13.9	0.11
Amino acids, plasma:													
Alanine	umol/L	441	2.3	4.5	19.88	739	2.4	4.7	34.78	-	-	-	-
Alloisoleucine	umol/L	21.8	4.7	9.2	2.01	213	3.2	6.3	13.36	-	-	-	-
Arginine	umol/L	56.7	2.8	5.5	3.11	287	2.2	4.3	12.38	-	-	-	-
Argininosuccinic acid	umol/L	-	-	-	-	13.8	4.1	8.0	1.11	-	-	-	-
Asparagine	umol/L	40.4	3.8	7.4	3.01	207	2.7	5.3	10.95	-	-	-	-
Aspartic acid	umol/L	15.2	3.9	7.6	1.16	105	3.1	6.1	6.35	-	-	-	-
Citrulline	umol/L	24.0	4.1	8.0	1.93	119	2.3	4.5	5.37	-	-	-	-
Cystathionine	umol/L	-	-	-	-	-	-	-	-	-	-	-	-
Cystine	umol/L	24.9	3.5	6.9	1.71	56.6	4.2	8.2	4.66	-	-	-	-
Glutamic acid	umol/L	182	2.6	5.1	9.27	289	2.5	4.9	14.18	-	-	-	-
Glutamine	umol/L	324	2.4	4.7	15.25	842	2.5	4.9	41.28	-	-	-	-
Glycine	umol/L	222	2.3	4.5	10.02	695	2.5	4.9	34.04	-	-	-	-
Histidine	umol/L	92.6	2.5	4.9	4.54	193	2.6	5.1	9.83	-	-	-	-
Homocystine	umol/L	-	-	-	-	13.1	8.9	17.4	2.28	-	-	-	-
Isoleucine	umol/L	68.7	2.6	5.1	3.50	120	2.6	5.1	6.10	-	-	-	-
Leucine	umol/L	134	2.2	4.3	5.76	278	2.2	4.3	11.97	-	-	-	-
Lysine	umol/L	189	2.6	5.1	9.65	307	2.7	5.3	16.22	-	-	-	-
Methionine	umol/L	28.0	3.8	7.4	2.08	64.3	3.7	7.3	4.66	-	-	-	-
Ornithine	umol/L	141	2.8	5.5	7.71	337	2.9	5.7	19.15	-	-	-	-
Phenylalanine	umol/L	83.2	2.3	4.5	3.75	436	2.2	4.3	18.78	-	-	-	-
Serine	umol/L	128	2.2	4.3	5.51	326	2.3	4.5	14.67	-	-	-	-
Threonine	umol/L	120	2.3	4.5	5.39	218	2.2	4.3	9.40	-	-	-	-
Tryptophan	umol/L	46.0	3.4	6.7	3.06	201	2.7	5.3	10.65	-	-	-	-
Tyrosine	umol/L	63.6	2.6	5.1	3.24	204	2.2	4.3	8.81	-	-	-	-
Valine	umol/L	222	2.5	4.9	10.86	424	2.5	4.9	20.76	-	-	-	-
Amino-levalinic acid, spot urine	umol/L	32.3	7.1	14.0	4.53	140	3.5	6.8	9.45	-	-	-	-
Anti-Cardiolipin Antibodies, serum	GPL/ml	58.3	13.8	27.1	15.78	30.9	18.2	35.6	11.00	-	-	-	-
Anti-beta-2-Glycoprotein-1 Antibodies, serum	RU/ml	99	9.3	18.2	18.07	21.0	19.1	37.4	7.84	-	-	-	-
Anti-Cyclic Citrullinated Peptides Antibodies, serum	RU/ml	108.6	9.0	17.6	19.11	18.8	11.1	21.7	4.08	-	-	-	-
Anti-dsDNA Antibodies, serum	IU/ml	222	11.8	23.0	51.14	94	12.2	24.0	22.62	-	-	-	-
Anti-Extractable Nuclear Antigen (ENA) Antibodies, serum (Screening ELISA)	RU/ml	130	3.8	7.4	9.56	37.9	7.5	14.6	5.55	-	-	-	-
Anti-Glomerular Basement Membrane Antibodies, serum	RU/ml	128	5.4	10.5	13.48	33.5	12.2	24.0	8.04	-	-	-	-
Anti-Intrinsic Factor Antibodies, serum	RU/ml	94.7	5.4	10.6	10.05	48.9	8.6	16.9	8.27	-	-	-	-
Anti-Myeloperoxidase Antibodies, serum	RU/ml	117	11.1	21.7	25.38	51.0	8.0	15.6	7.96	-	-	-	-
Anti-Proteinase-3 Antibodies, serum	RU/ml	110	9.6	18.9	20.74	29.3	15.9	31.1	9.13	-	-	-	-
Ammonia, plasma	umol/L	95	2.5	4.9	4.64	283	1.4	2.8	7.97	-	-	-	-
Amylase, serum	U/L	80.6	1.2	2.3	1.86	411	1.1	2.1	8.47	-	-	-	-
Androstenedione, serum	nmol/L	0.97	3.7	7.3	0.07	4.01	3.9	7.7	0.31	32.9	3.3	6.4	2.12
Arsenic acid, blood	nmol/L	39.6	3.2	6.3	2.50	73	2.7	5.3	3.87	139	2.5	4.9	6.79
Arsenic acid, total, urine	nmol/L	22.0	2.0	3.9	8.64	663	2.0	4.0	26.31	-	-	-	-
Arsenic acid, inorganic, urine	µg/L	2033	14.2	27.8	565.82	-	-	-	-	-	-	-	-
AST, serum	U/L	40.7	3.1	6.0	2.46	217	1.1	2.2	4.72	-	-	-	-
B													
Beta-2-microglobulin, serum	mg/L	1.67	4.4	8.7	0.15	3.96	3.2	6.3	0.25	6.32	2.9	5.7	0.36
Beta hydroxybutyrate (BOHB), Serum	mmol/L	0.18	3.3	6.4	0.01	1.03	1.8	3.6	0.04	4.18	1.8	3.6	0.15
Bilirubin, direct, serum	umol/L	-	-	-	-	29.8	2.1	4.2	1.24	124.17	1.5	3.0	3.76
Bilirubin, total, serum	umol/L	20.4	2.5	4.8	0.99	82.9	1.7	3.3	2.73	-	-	-	-
Biotinidase, serum	mol pABA /min/ml (3	2.1	12.1	23.7	0.51	9.59	6.3	12.3	1.18	-	-	-	-
Blood gases and acid-base, pCO2	kPa	8.85	1.7	3.3	0.30	5.50	1.2	2.3	0.13	2.63	2.2	4.4	0.12
Blood gases and acid-base, pH (pH units)	pH unit	7.18	0.1	0.1	0.01	7.43	0.1	0.1	0.01	7.65	0.1	0.1	0.01
Blood gases and acid-base, pO2	kPa	8.13	3.4	6.6	0.54	13.3	2.1	4.2	0.56	18.1	2.1	4.1	0.75
C													
C3, serum	g/L	0.98	2.4	4.6	0.05	1.83	2.0	3.9	0.07	-	-	-	-
C4, serum	g/L	0.16	2.6	5.1	0.01	0.31	1.9	3.8	0.01	-	-	-	-
CA 15-3, serum	ku/L	19.5	5.4	10.6	2.07	48.0	5.9	11.6	5.56	109.3	5.8	11.4	12.50
CA 19-9, serum	ku/L	20.1	2.4	4.7	0.94	89.3	2.5	4.8	4.29	245	2.4	4.8	11.65
CA 125, serum	ku/L	34.7	3.7	7.2	2.51	92.1	4.3	8.4	7.72	237	3.9	7.7	18.32
Cadmium, blood	nmol/L	13.3	4.0	7.8	1.04	31.4	3.4	6.6	2.07	59.9	3.3	6.4	3.83
Cadmium, urine	nmol/L	21.8	2.8	5.4	1.18	128	2.3	4.5	5.80	-	-	-	-
Calcitonin, serum	ng/L	46.7	4.4	8.7	4.05	127	3.6	7.1	8.96	465	2.9	5.7	26.54
Calcium, 24 Hr urine (concentration)	mmol/L	0.88	4.1	8.0	0.07	3.07	1.8	3.6	0.11	-	-	-	-
Calcium, ionised	mmol/L	1.33	0.9	1.7	0.02	0.97	0.9	1.8	0.02	0.44	3.2	6.2	0.03
Calcium, serum	mmol/L	2.12	1.5	2.9	0.06	3.05	1.2	2.4	0.07	-	-	-	-
Calcium, spot urine	mmol/L	0.88	4.1	8.0	0.07	3.07	1.8	3.6	0.11	-	-	-	-
Carbamazepine (Tegretol), serum	umol/L	35.1	3.2	6.2	2.17	60.1	2.7	5.3	3.17	-	-	-	-
Carboxyhaemoglobin fraction, whole blood	%	5.05	7.2	14.1	0.71	5.08	8.2	16.0	0.81	18.9	1.3	2.6	0.50
CEA, serum	ug/L	2.43	5.4	10.6	0.26	15.7	2.3	4.5	0.71	36.5	2.1	4.2	1.53
Ceruloplasmin, serum	g/L	0.16	1.9	3.8	0.01	0.28	1.8	3.5	0.01	-	-	-	-
Carnitine, free, serum	umol/L	7.2	5.3	10.4	0.75	38.1	4.4	8.6	3.28	76.9	4.6	9.0	6.93
Chloride, 24 Hr urine (concentration)	mmol/L	44.3	4.3	8.4	3.74	-	-	-	-	118	2.0	3.9	4.58

Chloride, serum	mmol/L	86.9	1.2	2.4	2.12	100	0.9	1.7	1.73	-	-	-	-
Chloride, spot urine	mmol/L	44.3	4.3	8.4	3.74	-	-	-	-	118	2.0	3.9	4.58
Cholesterol, serum	mmol/L	2.58	1.6	3.2	0.08	6.29	1.2	2.4	0.15	-	-	-	-
Cholinesterase, serum	U/L	4664	1.7	3.3	151.63	7354	1.3	2.6	188.28	-	-	-	-
Chromium, blood	nmol/l	38.8	11.8	23.0	8.93	109	5.2	10.3	11.19	202	5.1	10.1	20.32
Chromium, urine	nmol/l	74.2	8.8	17.3	12.84	181	5.2	10.1	18.28	-	-	-	-
CK, serum	U/L	165	1.6	3.2	5.32	477	1.4	2.7	12.90	-	-	-	-
Cobalt, blood	nmol/l	23.4	2.9	5.6	1.31	111	2.6	5.0	5.54	206	2.6	5.2	10.63
Cobalt, urine	nmol/l	33.6	2.5	4.8	1.61	161	2.5	4.8	7.80	-	-	-	-
Copper, 24 Hr urine (concentration)	µmol/L	0.94	3.4	6.6	0.06	1.81	3.1	6.1	0.11	-	-	-	-
Copper, serum	µmol/L	12.8	2.6	5.0	0.64	21.3	2.5	4.9	1.04	7.07	2.7	5.3	0.38
Cortisol, free, urine (concentration)	nmol/L	22.5	3.5	6.8	1.53	90	2.6	5.1	4.61	643	2.3	4.5	28.86
Cortisol, serum	nmol/L	104	2.7	5.3	5.54	532	2.3	4.6	24.46	922	2.4	4.7	43.06
C-peptide, serum	ug/L	1.27	3.2	6.3	0.08	5.29	2.9	5.6	0.30	8.34	3.5	6.9	0.57
Creatine, plasma	umol/L	63.1	3.7	7.3	4.57	92.9	4.6	9.0	8.38	-	-	-	-
Creatine, spot urine	umol/L	9.53	2.7	5.3	0.50	42.6	2.3	4.5	1.92	-	-	-	-
Creatinine by LCMS, spot urine	mmol/L	82.5	3.1	6.1	5.01	141	4.6	9.0	12.70	-	-	-	-
Creatinine, 24 Hr urine (concentration)	mmol/L	7.01	3.0	5.9	0.42	20.1	3.0	5.9	1.19	-	-	-	-
Creatinine, serum	umol/L	71.7	3.5	7.0	4.99	475	2.3	4.6	21.67	-	-	-	-
Creatinine, spot urine	mmol/L	7.01	3.0	5.9	0.42	20.1	3.0	5.9	1.19	-	-	-	-
CRP, serum	mg/L	7.59	3.1	6.0	0.45	28.3	3.4	6.8	1.91	-	-	-	-
Cyclosporin A, whole blood	µg/L	115	3.1	6.0	6.93	705	2.6	5.1	35.67	1622	3.2	6.2	100.12
D													
Dehydroepiandrosterone sulphate, serum	µmol/L	0.72	3.2	6.3	0.05	4.41	2.8	5.6	0.25	14.8	2.8	5.4	0.80
Digoxin, serum	nmol/L	1.13	5.9	11.6	0.13	2.63	3.5	6.9	0.18	4.455	3.2	6.3	0.28
Dopamine, urine (concentration)	nmol/L	136	5.0	9.8	13.33	402	2.3	4.5	18.02	1056	2.0	4.0	41.81
E													
E2, serum	pmol/L	289	4.6	9.1	26.14	1157	2.3	4.6	52.83	2857	2.2	4.3	124.23
Ethanol, serum	mmol/L	19.7	2.7	5.3	1.04	51.3	2.4	4.8	2.44	-	-	-	-
Everolimus, whole blood	µg/L	3.44	4.3	8.4	0.29	16.9	2.6	5.0	0.85	25.7	2.9	5.7	1.48
F													
FE, serum	umol/L	12.4	3.8	7.5	0.93	44.5	1.5	3.0	1.32	-	-	-	-
Ferritin, serum	ug/L	31.8	2.5	4.8	1.54	201	2.5	4.9	9.93	397	4.1	7.9	31.54
FK506	µg/L	3.49	3.1	6.2	0.21	14.1	2.5	5.0	0.70	25.6	2.9	5.7	1.45
Folate, serum	nmol/L	9.9	5.0	9.7	0.97	29.0	2.9	5.7	1.64	41.8	3.4	6.7	2.80
FSH, serum	IU/L	8.19	2.0	3.9	0.32	16.5	2.0	3.9	0.64	40.7	2.0	4.0	1.64
FT3, serum	pmol/L	4.05	3.4	6.6	0.27	9.9	2.1	4.1	0.41	19.9	1.9	3.8	0.76
FT4, serum	pmol/L	16.9	5.4	10.7	1.81	35.2	4.9	9.6	3.36	54.7	4.4	8.7	4.77
G													
GGT, serum	U/L	46.8	1.5	2.9	1.38	177	1.2	2.4	4.17	-	-	-	-
Glucose, CSF	mmol/L	3.18	1.9	3.8	0.12	-	-	-	-	-	-	-	-
Glucose, plasma	mmol/L	5.22	1.7	3.3	0.17	15.9	1.6	3.1	0.49	-	-	-	-
Glycosaminoglycan, spot urine	mmol/L	13.81	9.9	19.4	2.68	40.9	4.5	8.8	3.61	112.7	3.5	6.9	7.73
Growth hormone, serum	miU/L	11.05	3.3	6.4	0.71	25.9	2.6	5.0	1.30	47.42	3.1	6.1	2.90
Guanidinoacetate, plasma	umol/L	5.88	5.0	9.8	0.58	14.7	4.2	8.2	1.21	-	-	-	-
Guanidinoacetate, spot urine	umol/L	3.05	3.9	7.6	0.23	14.2	3.1	6.1	0.86	-	-	-	-
H													
Haptoglobin, serum	g/L	0.77	1.4	2.8	0.02	1.47	1.0	2.0	0.03	-	-	-	-
HbA1c, whole blood	%	5.75	1.2	2.4	0.14	10.45	1.3	2.5	0.27	-	-	-	-
HCG, serum	IU/L	4.55	3.1	6.1	0.28	17.3	2.4	4.8	0.82	392	2.3	4.4	17.30
HDL cholesterol, serum	mmol/L	0.52	1.9	3.8	0.02	1.36	2.1	4.0	0.05	-	-	-	-
5-HIAA, urine (concentration)	µmol/L	18.9	3.8	7.5	1.41	153	3.8	7.5	11.53	-	-	-	-
I													
IGF1, serum	µg/L	138	4.2	8.3	11.38	300	3.1	6.1	18.23	531	2.9	5.6	29.98
IgA, serum	g/L	1.24	2.5	4.9	0.06	2.14	1.8	3.6	0.08	3.10	1.8	3.5	0.11
IgG, serum	g/L	7.46	1.5	3.0	0.22	13.5	1.6	3.1	0.42	18.4	2.2	4.4	0.80
IgM, serum	g/L	0.56	3.8	7.4	0.04	1.06	1.9	3.7	0.04	1.55	1.4	2.8	0.04
IgE, total	kU/L	374	7.2	14.2	52.91	90.0	5.2	10.1	9.12	111	4.5	8.7	9.73
Insulin, serum	miU/L	6.11	13.0	25.4	1.55	17.5	8.1	15.8	2.76	43.3	9.2	18.0	7.79
Iodine, urine	nmol/l	0.89	3.0	5.9	0.05	3.99	2.7	5.2	0.21	-	-	-	-
Isopropanol, blood	mmol/L	4.90	5.7	11.2	0.55	13.30	3.4	6.7	0.89	-	-	-	-
L													
Lactate, plasma	mmol/L	1.09	1.6	3.1	0.03	4.50	1.3	2.6	0.12	-	-	-	-
Lactate, CSF	mmol/L	1.88	1.5	3.0	0.06	-	-	-	-	-	-	-	-
LDH, serum	U/L	152	1.6	3.2	4.83	396	1.4	2.7	10.50	-	-	-	-
LDL cholesterol, serum	mmol/L	1.64	1.3	2.6	0.04	3.86	1.3	2.5	0.10	-	-	-	-
Lead, 24 Hr urine (concentration)	µmol/L	122	5.4	10.7	13.00	238	4.7	9.2	22.01	-	-	-	-
Lead, whole blood	ug/dL	3.50	2.6	5.1	0.18	8.96	2.5	5.0	0.45	24.9	2.4	4.7	1.17
LH, serum	IU/L	6.10	2.7	5.2	0.32	21.6	2.9	5.8	1.25	68.6	3.3	6.4	4.39
Lithium, serum	mmol/L	0.78	2.3	4.5	0.04	2.00	1.9	3.7	0.07	-	-	-	-
M													
Magnesium, 24 Hr urine (concentration)	mmol/L	1.68	3.4	6.6	0.11	-	-	-	-	1.863	2.8	5.6	0.10
Magnesium, serum	mmol/L	0.96	1.3	2.5	0.02	1.62	1.0	1.9	0.03	-	-	-	-
Magnesium, spot urine	mmol/L	1.68	3.4	6.6	0.11	-	-	-	-	1.863	2.8	5.6	0.10
Manganese, blood	nmol/L	145	3.0	5.8	8.45	265	2.4	4.7	12.37	385	2.6	5.0	19.44
Manganese, urine	nmol/L	72.2	3.3	6.5	4.66	177	2.5	4.9	8.57	-	-	-	-
Mercury, blood	nmol/L	14.6	4.3	8.5	1.24	42.7	4.4	8.7	3.69	83.3	4.4	8.7	7.23
Mercury, urine	nmol/L	11.8	6.0	11.7	1.39	82.8	3.2	6.3	5.25	-	-	-	-
Metanephrines, free, urine (concentration)	nmol/L	76	4.3	8.4	6.37	222	3.6	7.1	15.79	843	3.1	6.1	51.41
Methaemoglobin fraction, whole blood	%	15.8	0.6	1.1	0.17	2.81	5.3	10.3	0.29	6.72	3.6	7.0	0.47
Methanol, blood	mmol/L	3.1	8.8	17.2	0.53	24.20	3.1	6.1	1.47	-	-	-	-
3-Methoxytyramine, free, urine (concentration)	nmol/L	61.0	3.6	7.1	4.35	278	2.7	5.4	14.94	835	3.1	6.1	50.91
Methotrexate, serum	umol/L	0.43	3.7	7.3	0.03	1.17	4.1	8.0	0.09	8.13	4.1	8.0	0.65
Mycophenolic acid, total, plasma	mg/L	0.28	3.2	6.3	0.02	1.93	3.0	5.8	0.11	7.59	3.1	6.1	0.47
N													
Noradrenaline, urine (concentration)	nmol/L	75.7	6.2	12.2	9.23	228	2.9	5.6	12.84	367	3.3	6.5	23.81
Normetanephrines, free, urine (concentration)	nmol/L	468	2.8	5.6	26.06	1394	2.9	5.7	79.79	2533	3.2	6.2	156.85
Nickel, urine	nmol/L	53.7	8.1	15.9	8.54	245	3.4	6.6	16.25	-	-	-	-
NT pro B-Natriuretic peptide, Serum	ng/L	118	3.0	5.9	6.99	3798	2.2	4.3	162.76	315	2.2	4.3	13.53
O													
Osmolality, serum	mOsm/Kg	333	0.7	1.4	4.70	-	-	-	-	-	-	-	-
Osmolality, spot urine	mOsm/Kg	861	0.5	1.0	8.61	-	-	-	-	-	-	-	-
Oxalate, 24 Hr urine (concentration)	mmol/L	0.25	7.1	13.9	0.03	1.01	5.3	10.3	0.10	-	-	-	-
Oxyhaemoglobin, FO2Hb	%	77.4	0.4	0.7	0.58	89.9	0.4	0.9	0.77	58.5	0.4	0.8	0.45

P													
Paracetamol, serum	umol/L	73.5	4.4	8.6	6.33	523	4.1	8.1	42.55	-	-	-	-
Phenobarbital (Luminal), serum	umol/L	103	3.6	7.0	7.24	205	2.9	5.7	11.78	-	-	-	-
Phenytoin (Dilantin), serum	umol/L	49.2	4.2	8.3	4.07	94.0	4.2	8.3	7.76	-	-	-	-
Phosphate, 24 Hr urine (concentration)	mmol/L	11.8	1.9	3.8	0.45	24.1	1.6	3.2	0.77	-	-	-	-
Phosphate, serum	mmol/L	1.04	3.2	6.2	0.06	2.55	1.6	3.2	0.08	-	-	-	-
Phosphate, spot urine	mmol/L	11.8	1.9	3.8	0.45	24.1	1.6	3.2	0.77	-	-	-	-
pH, spot urine		4.02	0.3	0.6	0.02	7.05	0.3	0.6	0.04	-	-	-	-
Porphobilinogen, spot urine	umol/L	7.74	7.4	14.6	1.13	75.7	9.3	18.1	13.73	-	-	-	-
Potassium, 24 Hr urine (concentration)	mmol/L	18.8	1.1	2.2	0.42	-	-	-	-	62.0	2.5	4.9	3.03
Potassium, serum	mmol/L	4.64	0.8	1.5	0.07	6.34	0.6	1.1	0.07	-	-	-	-
Potassium, spot urine	mmol/L	18.8	1.1	2.2	0.42	-	-	-	-	62.0	2.5	4.9	3.03
Progesterone, serum	nmol/L	2.83	6.0	11.7	0.33	35.4	3.0	5.9	2.07	80	2.7	5.2	4.19
Prolactin, serum	mIU/L	208	3.6	7.0	14.60	503	3.4	6.7	33.65	1120	3.4	6.7	75.33
Protein, total, 24 Hr urine (concentration)	g/L	0.20	3.6	7.0	0.01	0.55	1.3	2.5	0.01	-	-	-	-
Protein, total, CSF	g/L	0.34	2.3	4.6	0.02	-	-	-	-	-	-	-	-
Protein, total, spot urine	g/L	0.20	3.6	7.0	0.01	0.55	1.3	2.5	0.01	-	-	-	-
Protein, total, serum	g/L	41.4	2.0	4.0	1.66	68.6	1.6	3.2	2.19	-	-	-	-
PSA, serum	ug/L	0.36	2.8	5.5	0.02	3.80	2.4	4.8	0.18	24.4	2.4	4.7	1.15
PTH, plasma	pmol/L	2.74	5.8	11.4	0.31	17.2	2.2	4.3	0.73	53.2	2.2	4.2	2.26
R													
Renin activity, plasma	ng/mL/hr	2.61	5.8	11.3	0.30	6.9	4.9	9.6	0.66	15.55	4.4	8.5	1.33
S													
Salicylate, serum	mmol/L	0.44	2.3	4.5	0.02	1.17	1.8	3.5	0.04	-	-	-	-
Selenium, serum	umol/l	0.81	3.2	6.3	0.05	1.45	3.0	5.9	0.09	0.48	3.7	7.2	0.03
Sex hormone binding globulin, serum	nmol/L	37.1	4.4	8.6	3.18	35.0	4.0	7.9	2.78	33.6	3.6	7.1	2.38
Sirolimus, whole blood	ug/L	3.53	4.8	9.4	0.33	17.7	2.5	4.9	0.87	25.5	3.2	6.2	1.58
Sodium, 24 Hr urine (concentration)	mmol/L	52.1	3.3	6.4	3.33	-	-	-	-	90.3	2.1	4.2	3.75
Sodium, serum	mmol/L	122	0.8	1.5	1.86	151	0.6	1.1	1.69	-	-	-	-
Sodium, spot urine	mmol/L	52.1	3.3	6.4	3.33	-	-	-	-	90.3	2.1	4.2	3.75
STSH, serum	mIU/L	0.92	2.2	4.2	0.04	6.12	2.0	3.9	0.24	33.6	2.1	4.1	1.39
T													
Testosterone, serum	nmol/L	3.52	3.6	7.0	0.25	12.9	2.6	5.2	0.67	28.4	2.7	5.4	1.52
Testosterone(MS), serum	nmol/L	0.66	3.6	7.0	0.05	4.83	3.3	6.4	0.31	25.9	2.9	5.8	1.49
Theophylline (Aminophylline), serum	umol/L	83.1	3.1	6.1	5.06	167	2.5	4.9	8.24	-	-	-	-
Thyroglobulin, serum	ug/L	3.92	2.7	5.2	0.21	42.1	2.8	5.4	2.28	103	2.8	5.6	5.72
Thyroglobulin antibody, serum	kiU/L	121	4.4	8.6	10.44	293	5.6	11.0	32.22	1075	8.8	17.2	184.68
Thyroid peroxidase antibody, serum	kiU/L	59.9	7.6	15.0	8.97	116	6.4	12.5	14.56	247	5.8	11.4	28.30
TIBC, serum	umol/L	23.0	6.3	12.3	2.82	18.6	7.2	14.2	2.64	-	-	-	-
Triglyceride, serum	mmol/L	0.98	2.3	4.4	0.04	2.11	1.7	3.3	0.07	-	-	-	-
Troponin T, plasma	ng/L	24.8	2.2	4.2	1.05	143	1.9	3.8	5.47	2227	1.9	3.8	83.70
U													
Urate, 24 Hr urine (concentration)	mmol/L	709	2.3	4.4	31.51	1421	2.3	4.6	64.83	-	-	-	-
Urate, serum	mmol/L	263	1.4	2.7	7.22	519	1.3	2.6	13.64	-	-	-	-
Urate, spot urine	mmol/L	709	2.3	4.4	31.51	1241	2.7	5.2	64.83	-	-	-	-
Urea, 24 Hr urine (concentration)	mmol/L	129	2.6	5.1	6.59	261	2.4	4.7	12.25	-	-	-	-
Urea, serum	mmol/L	6.27	2.4	4.8	0.30	16.7	2.3	4.6	0.77	-	-	-	-
Urea, spot urine	mmol/L	129	2.6	5.1	6.59	261	2.4	4.7	12.25	-	-	-	-
V													
Valproate (Epilim), serum	umol/L	530	5.1	10.1	53.32	860	5.3	10.4	89.17	-	-	-	-
Vitamin B12 Active, serum	pmol/L	15.3	4.7	9.2	1.41	46.4	4.4	8.6	4.01	-	-	-	-
Vit. D 25-hydroxy, serum	nmol/L	17.2	4.0	7.8	1.35	73.5	2.1	4.1	3.01	174	2.7	5.2	9.06
Very long chain fatty acid, serum:													
Pristanic acid	umol/L	0.97	3.3	6.5	0.06	3.83	2.5	4.9	0.19	-	-	-	-
Phytanic acid	umol/L	2.52	3.2	6.3	0.16	11.7	1.9	3.7	0.44	-	-	-	-
Docosanoic acid (C22)	umol/L	51.5	2.6	5.1	2.62	79.0	3.5	6.9	5.42	-	-	-	-
Tetacosanoic acid (C24)	umol/L	46.6	2.4	4.7	2.19	81.2	3.5	6.9	5.57	-	-	-	-
Hexacosanoic acid (C26)	umol/L	0.95	2.7	5.3	0.05	4.73	3.8	7.4	0.35	-	-	-	-
VMA, urine (concentration)	umol/L	15.6	4.7	9.2	1.42	83.8	3.0	5.8	4.86	-	-	-	-
Z													
Zinc, serum	umol/l	23.0	2.8	5.4	1.29	28.5	2.6	5.0	1.44	9.5	3.2	6.3	0.59
Zinc, 24 Hr urine	umol/l	2.81	3.6	7.0	0.20	9.00	3.6	7.0	0.63	-	-	-	-
Zinc, blood	umol/l	7.08	3.7	7.3	0.47	9.60	3.1	6.0	0.58	12.0	3.7	7.2	0.86
FLUID													
AFP, fluid	ug/L	33.1	3.4	6.7	2.22	130	2.7	5.3	6.87	273	2.7	5.3	14.44
Albumin, fluid	g/L	24.1	2.4	4.7	1.14	40.8	1.8	3.6	1.46	-	-	-	-
Alanine aminotransferase, fluid	U/L	30.1	4.3	8.4	2.54	90.3	1.9	3.8	3.43	-	-	-	-
Alkaline phosphatase, fluid	U/L	112.9	2.1	4.1	4.64	429	1.8	3.6	15.41	-	-	-	-
Amylase, fluid	U/L	80.6	1.2	2.3	1.86	411	1.1	2.1	8.47	-	-	-	-
Bilirubin, total, fluid	umol/L	20.4	2.5	4.8	0.99	82.9	1.7	3.3	2.73	-	-	-	-
Calcium, fluid	mmol/L	2.12	1.5	2.9	0.06	3.05	1.2	2.4	0.07	-	-	-	-
CEA, fluid	ug/L	2.43	5.4	10.6	0.26	15.7	2.3	4.5	0.71	36.5	2.1	4.2	1.53
Chloride, fluid	mmol/L	86.9	1.2	2.4	2.12	100	0.9	1.7	1.73	-	-	-	-
Cholesterol, fluid	mmol/L	2.58	1.6	3.2	0.08	6.29	1.2	2.4	0.15	-	-	-	-
Creatinine, fluid	umol/L	71.7	3.5	7.0	4.99	475	2.3	4.6	21.67	-	-	-	-
GGT, fluid	U/L	46.8	1.5	2.9	1.38	177	1.2	2.4	4.17	-	-	-	-
Glucose, fluid	mmol/L	5.22	1.7	3.3	0.17	15.9	1.6	3.1	0.49	-	-	-	-
HCG, fluid	IU/L	4.55	3.1	6.1	0.28	17.3	2.4	4.8	0.82	392	2.3	4.4	17.30
LDH, fluid	U/L	152	1.6	3.2	4.83	396	1.4	2.7	10.50	-	-	-	-
Osmolality, fluid	mOsm/Kg	284	0.7	1.4	4.00	-	-	-	-	-	-	-	-
Phosphate, fluid	mmol/L	1.04	3.2	6.2	0.06	2.55	1.6	3.2	0.08	-	-	-	-
Potassium, fluid	mmol/L	4.64	0.8	1.5	0.07	6.34	0.6	1.1	0.07	-	-	-	-
Protein, total, fluid	g/L	41.4	2.0	4.0	1.66	68.6	1.6	3.2	2.19	-	-	-	-
Sodium, fluid	mmol/L	122	0.8	1.5	1.86	151	0.6	1.1	1.69	-	-	-	-
Triglyceride, fluid	mmol/L	0.98	2.3	4.4	0.04	2.11	1.7	3.3	0.07	-	-	-	-
Urate, fluid	mmol/L	263	1.4	2.7	7.22	519	1.3	2.6	13.64	-	-	-	-
Urea, fluid	mmol/L	6.27	2.4	4.8	0.30	16.7	2.3	4.6	0.77	-	-	-	-
POCT													
Blood gases and acid-base . pCO2	Kpa	9.50	2.4	4.7	0.45	5.42	2.4	4.7	0.25	3.02	4.6	9.1	0.27
Blood gases and acid-base, pH	pH unit	7.14	0.1	0.1	0.01	7.35	0.1	0.2	0.01	7.54	0.1	0.2	0.02
Blood gases and acid-base, pO2	Kpa	20.3	1.6	3.1	0.63	13.8	1.8	3.6	0.49	8.95	2.9	5.7	0.51
Calcium, ionised	mmol/L	1.53	1.6	3.2	0.05	1.17	2.0	4.0	0.05	0.84	1.1	2.1	0.02
Neonatal bilirubin	umol/L	344	2.6	5.1	17.64	211	2.4	4.6	9.80	89.0	3.4	6.6	5.88
Total haemoglobin, tHb	umol/L	18.0	0.6	1.1	0.20	14.1	0.7	1.4	0.20	8.00	1.3	2.5	0.20
Oxyhaemoglobin, FO2Hb	%	78.3	0.4	0.8	0.59	92.3	0.4	0.8	0.78	60.1	0.8	1.6	0.98
Carboxyhaemoglobin, FCOHb	%	3.50	8.6	16.8	0.59	3.70	8.1	15.9	0.59	18.4	1.6	3.2	0.59
Methaemoglobin, FMethb	%	15.6	0.6	1.3	0.20	1.50	13.3	26.1	0.39	5.30	7.5	14.8	0.78

Potassium, blood	mmol/L	2.99	0.7	1.3	0.04	4.98	0.6	1.2	0.06	6.98	0.6	1.1	0.08
Sodium, blood	mmol/L	115	0.4	0.8	0.98	136	0.4	0.7	0.98	156	0.4	0.8	1.18
Chloride, blood	mmol/L	80.0	0.0	0.0	0.00	100	1.0	2.0	1.96	121	0.8	1.6	1.96
Lactate, blood	mmol/L	12.0	5.2	10.3	1.23	0.91	6.6	12.9	0.12	3.01	4.0	7.8	0.24
Glucose, blood	mmol/L	3.44	5.8	11.3	0.39	-	-	-	-	16.2	3.6	7.1	1.15

Reference:

Adopted from Tools, Technologies and Training for Health care Laboratories, Westgard QC: Desirable Biological Variation Database specifications 2014.

Ricos C, Alvarez V, Cava F, Garcia-Lario JV, Hernandez A, Jimenez CV, Minchinela J, Perich C, Simon M. "Current databases on biologic variation: pros, cons and progress." Scand J Clin Lab Invest 1999;59:491-500. Database was updated in 2014.