Core Biochemistry Reference Intervals

General Chemistry

This document is valid as of the date of issue and will be updated as required by Canterbury Health Laboratories (CHL). Outside of Canterbury Health Laboratories, this document should be used with caution.

Please contact CHL should you require an updated version.

Test Name	Additional Information	Reference Intervals		Units	Revision Date
		Lower	Upper		
Alanine aminotransferase (ALT)	Male	0	40	U/L	Aug-14
	Female	0	30		
Albumin	0 days – 14 days	28	41	g/L	Jun-15
	> 14 days – 1 yr	28	45		
	> 1 yr – 8 yrs	35	45		
	> 8 yrs – 15 yrs	37	47		
	> 16 yrs	32	48		
Alkaline Phosphatase (ALP)	0 days – 1 yr	60	500	U/L	Aug-14
	> 1 yr – 11 yrs	80	360		
	> 11 yrs – 16 yrs (Male)	90	450		
	> 11 yrs – 16 yrs (Female)	80	400		
	> 16 yrs – 18 yrs (Male)	70	300		
	> 16 yrs – 18 yrs (Female)	50	200		
	> 18 yrs	30	150		
Ammonia	< 30 days		< 50	µmol/L	May-10
	> 30 days	11	32		
Amylase (Total)			< 100	U/L	Jun-09
Anion Gap		10	20	mmol/L	Dec-04
Aspartate aminotransferase (AST)	1 days – 1 mth	20	200	U/L	Aug-14
	> 1 mth – 2 yrs	20	80		
	> 2 yrs – 5 yrs	15	60		
	> 5 yrs	10	50		
β Hydroxybutrate			< 0.3	mmol/L	Nov-13
Bicarbonate	0 – 2 yrs	19	24	mmol/L	Dec-21
	> 2 yrs	22	32		
Bile Acids (non-fasting)			< 15	µmol/L	Sep-19
Bilirubin – Cord blood		10	40	µmol/L	Aug-14
Bilirubin - Conjugated		0	5	µmol/L	Aug-14
Bilirubin	Age same as DOB	0	50	µmol/L	Aug-14
	1 day	0	100		
	2 days	0	140		
	3 days	0	200		
	4 days – 14 days	0	170		
	> 2 weeks – 6 weeks	3	23		
	> 6 weeks	2	20		
Calcium	0 days – < 1 wk	1.9	2.8	mmol/L	Jun-22
	1 wk – < 26 wks	2.2	2.8		
	26 wks – < 18 yrs	2.2	2.7		
	> 18 yrs	2.2	2.6		
Calcium – Ionised, serum pH 7.4		1.13	1.26	mmol/L	Oct-05
Chloride		95	110	mmol/L	Jun-09

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		Lower	Upper		
Creatinine	0 days – 1 mth	20	60	µmol/L	Aug-14
	> 1 mth – 2 yrs	20	50		
	> 2 yrs – 4 yrs	20	60		
	> 4 yrs – 6 yrs	25	65		
	> 6 yrs – 10 yrs	25	70		
	> 10 yrs – 15 yrs	40	80		
	> 15 yrs (Male)	50	110		
	> 15 yrs (Female)	45	90		
Creatine Kinase (CK)	Male	60	220	U/L	Jul-13
	Female	30	180		
C-Reactive Protein (CRP)			< 5	mg/L	Jun-08
est. GFR		80	120	ml/min/1.73^2	Mar-05
Gamma glutamyl transferase (GGT)	0 days – 6 mths		< 150	U/L	Aug-14
	> 6 mths – 1 yrs		< 50		
	> 1 yr – 12 yrs		< 30		
	> 12 yrs (Male)	10	50		
	> 12 yrs (Female)	10	35		
Glucose	Random	3.5	7.7	mmol/L	Jun-09
	Fasting	3.5	6		
Lactate		0.5	2	mmol/L	Jul-08
Lactate Dehydrogenase (LD)	0 days – 14 days	310	1220	U/L	Sep-17
	> 14 days – 1 yr	190	450		
	> 1 yr – 10 yrs	190	320		
	> 10 yrs – 15 yrs	160	280		
	> 15 yrs – 18 yrs	130	250		
	> 18 yrs	110	220		
Lipase		10	60	U/L	Sep-22
Magnesium		0.6	1.2	mmol/L	Jul-09
Osmolality		280	300	mmol/kg	Mar-05
Phosphate	0 days – 30 days	1.3	2.5	mmol/L	Jun-09
	31 days – 1 yr	1.2	2.2		
	> 1 yr – 4 yrs	1.1	2		
	> 4 yrs – 11 yrs	1	2		
	> 11 yrs – 16 yrs	0.9	1.9		
	> 16 yrs	0.8	1.5		
Potassium		3.5	5.2	mmol/L	Jun-09
Sodium		135	145	mmol/L	Jun-09
Total Protein	0 days – 2 mths	45	70	g/L	Aug-14
	> 2 mths – 1 yr	50	80		
	> 1 yr – 6 yrs	55	80		
	> 6 yrs – 11 yrs	60	83		
	> 11 yrs	64	83		
Urate (Uric Acid)	0 days – 11 yrs	0.08	0.34	mmol/L	Jun-09
	> 11 yrs (Male)	0.2	0.42		
	> 11 yrs (Female)	0.15	0.36		

Test Name	Additional Information	Reference Intervals		Units	Revision Date
		Lower	Upper		
Urea	1 day – 30 days	1.1	6.1	mmol/L	Aug-14
	> 1 mth – 2 yrs	0.7	5		
	> 2 yrs – 4 yrs	1.1	5		
	> 4 yrs – 6 yrs	1.1	5.7		
	> 6 yrs – 10 yrs	1.4	5.7		
	> 10 yrs – 13 yrs	1.8	6.4		
	> 13 yrs	3.2	7.7		