

Haematology Reference Intervals

Routine Haematology

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. Amendments table provided at the end of the document.

Test Name	Additional Information	Reference Intervals		Units	Source of Reference Interval	Revision Date
		Lower	Upper			
Haemoglobin	Cord	124	192	g/L	SIQAG Haematology Comparability Document Version 1-7.	28/06/21
	0 – 30 days	120	200			
	1 mth	93	158			
	2 – 3 mths	97	130			
	4 – 11 mths	105	136			
	1 – 3 yrs	105	140			
	4 – 7 yrs	113	145			
	8 – 12 yrs	115	145			
	13 – 15 yrs (Male)	125	160			
	13 – 15 yrs (Female)	115	150			
	Adult (Male)	130	175			
	Adult (Female)	115	155			
	Antenatal	100	150			
Haematocrit (Hct)	Cord	0.37	0.56	ratio L/L	SIQAG Haematology Comparability Document Version 1-7.	28/06/21
	0 – 30 days	0.40	0.65			
	1 mth	0.27	0.46			
	2 – 3 mths	0.29	0.38			
	4 – 11 mths	0.31	0.40			
	1 – 3 yrs	0.32	0.41			
	4 – 7 yrs	0.33	0.42			
	8 – 12 yrs	0.35	0.43			
	13 – 15 yrs (Male)	0.37	0.47			
	13 – 15 yrs (Female)	0.35	0.44			
	Adult (Male)	0.40	0.52			
	Adult (Female)	0.35	0.46			
	Antenatal	0.31	0.47			

Test Name	Additional Information	Reference Intervals		Units	Source of Reference Interval	Revision Date
		Lower	Upper			
Red Cell Count	0 – 30 days	3.90	6.00	X 10 ¹² /L	SIQAG Haematology Comparability Document Version 1-7.	28/06/21
	1 mth	2.90	4.80			
	2 – 3 mths	3.30	4.80			
	4 – 11 mths	4.00	5.30			
	1 – 3 yrs	4.00	5.40			
	4 – 7 yrs	4.10	5.40			
	8 – 9 yrs	4.15	5.40			
	10-12 yrs	4.20	5.60			
	13 – 15 yrs (Male)	4.40	5.70			
	13 – 15 yrs (Female)	4.00	5.35			
	Adult (Male)	4.30	6.00			
	Adult (Female)	3.60	5.60			
Mean Cell Volume (MCV)	Cord	99	119	fL	SIQAG Haematology Comparability Document Version 1-7.	28/06/21
	0 – 30 days	90	120			
	1 mth	89	100			
	2 – 3 mths	72	91			
	4 – 11 mths	69	84			
	1 – 3 yrs	70	86			
	4 – 7 yrs	74	87			
	8 – 12 yrs	75	90			
	13 – 15 yrs	78	93			
	Adult	80	99			

Test Name	Additional Information	Reference Intervals		Units	Source of Reference Interval	Revision Date
		Lower	Upper			
Mean Cell Haemoglobin (MCH)	Cord	32	39	pg	SIQAG Haematology Comparability Document Version 1-7.	28/06/21
	0 – 30 days	28	38			
	1 mth	28	34			
	2 – 3 mths	24	32			
	4 – 11 mths	22	29			
	1 – 3 yrs	23	29			
	4 – 7 yrs	24	29			
	8 – 12 yrs	24	30			
	13 – 15 yrs	25	31			
	Adult	27	33			
Mean Cell Haemoglobin Concentration (MCHC)	Cord	305	345	g/L	SIQAG Haematology Comparability Document Version 1-7.	28/06/21
	0 - 1 mth	324	364			
	2 – 3 mths	323	361			
	4 – 11 mths	315	353			
	1 – 3 yrs	317	353			
	4 – 7 yrs	319	353			
	8 – 12 yrs	315	350			
	13 – 15 yrs (Male)	318	353			
	13 – 15 yrs (Female)	315	350			
	Adult	300	365			
Red Cell Distribution Width (RDW)	Cord	15.0	19.0	%	SIQAG Haematology Comparability Document Version 1-7.	28/06/21
	0 – 30 days	13.2	18.0			
	1 mth	13.2	17.5			
	2 – 3 mths	11.9	16.2			
	4 – 11 mths	12.0	16.0			
	1 – 3 yrs	12.0	15.5			
	4 – 12 yrs	12.0	14.5			
	13 – 15 yrs (Male)	12.0	14.5			
	13 – 15 yrs (Female)	12.0	15.0			
	Adult	11.5	15.0			

Test Name	Additional Information	Reference Intervals		Units	Source of Reference Interval	Revision Date
		Lower	Upper			
Platelets	Cord	150	400	X 10 ⁹ /L	SIQAG Haematology Comparability Document Version 1-7.	28/06/21
	0 – 3 mths	150	650			
	4 – 11 mths	150	575			
	1 – 3 yrs	150	300			
	4 – 7 yrs	150	475			
	8 – 12 yrs	150	425			
	13 – 15 yrs	150	400			
	Adult	150	400			
White Cell Count	Cord	7.2	25.8	X 10 ⁹ /L	SIQAG Haematology Comparability Document Version 1-7.	28/06/21
	0 – 30 days	5.0	20.0			
	1 mth	5.8	13.0			
	2 – 3 mths	6.6	15.0			
	4 – 11 mths	6.4	17.0			
	1 – 3 yrs	5.0	14.5			
	4 – 7 yrs	4.5	12.0			
	8 – 12 yrs	4.3	12.0			
	13 – 15 yrs	4.2	10.0			
	Adult	4.0	11.0			
	Antenatal	4.0	15.0			
Neutrophils	Cord	3.3	13.0	X 10 ⁹ /L	SIQAG Haematology Comparability Document Version 1-7.	28/06/21
	0 – 30 days	2.0	12.0			
	1 mth	0.5	3.9			
	2 – 3 mths	0.8	4.7			
	4 – 11 mths	0.9	5.9			
	1 – 3 yrs	1.0	7.0			
	4 – 7 yrs	1.5	8.0			
	8 – 12 yrs	1.5	7.0			
	13 – 15 yrs	1.8	7.0			
	Adult	1.9	7.5			
	Antenatal	1.9	10.5			

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		Lower	Upper			
Lymphocytes	Cord	2.1	10.7	X 10 ⁹ /L	SIQAG Haematology Comparability Document Version 1-7.	28/06/21
	0 – 30 days	2.0	14.0			
	1 mth	3.7	8.0			
	2 – 3 mths	4.2	10.6			
	4 – 11 mths	3.5	11.5			
	1 – 3 yrs	2.0	8.0			
	4 – 7 yrs	1.4	5.7			
	8 – 12 yrs	1.4	4.5			
	13 – 15 yrs	1.4	4.0			
	Adult	1.0	4.0			
Monocytes	Cord	0.7	2.7	X 10 ⁹ /L	SIQAG Haematology Comparability Document Version 1-7.	28/06/21
	0 - 1 mth	0.5	1.5			
	2 – 3 mths	0.4	1.3			
	4 – 11 mths	0.3	1.5			
	1 – 3 yrs	0.3	1.3			
	4 – 7 yrs	0.3	1.0			
	8 – 15 yrs	0.3	0.9			
	Adult	0.2	1.0			
Eosinophils	Cord	0	1.0	X 10 ⁹ /L	SIQAG Haematology Comparability Document Version 1-7.	28/06/21
	0 – 3 yrs	0	0.9			
	4 – 7 yrs	0	1.0			
	8 – 12 yrs	0	0.9			
	13 – 15 yrs	0	0.8			
	Adult	0	0.5			
Basophils	Cord	0	0.2	X 10 ⁹ /L	SIQAG Haematology Comparability Document Version 1-7.	28/06/21
	0 – 15 yrs	0	0.2			
	Adult	0	0.2			
Meta/myelocytes	Adult	0.0	0.06	X 10 ⁹ /L	SIQAG Haematology Comparability Document Version 1-7.	28/06/21
Reticulocytes	Adult	20	100	X 10 ⁹ /L	SIQAG Haematology Comparability Document Version 1-7.	28/06/21

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Erythrocyte Sedimentation Rate (ESR)	<= 20 yrs	1	10	mm/hr	SIQAG Haematology Comparability Document Version 1-7 LGH Meeting 6-11-2024	27-11-2024
	21 – 50 yrs	1	25			
	51 – 65 yrs	1	30			
	>65 yrs	1	40			

Amendments

Issue number	Date reviewed	Summary of Change
1	20 Sep 2022	New document.
2	31 Jul 2024	Added document reference to footer and amendments table.
3	27 Nov 2024	Reticulocyte and ESR ranges updated, meta/myelocytes range extended to all age groups
4	6 Jan 2025	Added 'accepted by' box and signatures

Accepted by

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