HAEMATOLOGY
ADULT REFERENCE RANGES

YOU MUST ENSURE YOU ARE WORKING TO A CURRENT VERSION OF THIS DOCUMENT

Haematology			
Full Blood Count	**Male**	**Female**	**Units**
Haemoglobin	130 – 171	115 – 154	g/L
Red Cell Count	3.9 – 5.77	3.69 – 5.21	$x10^{12}$/L
Haematocrit	0.37 – 0.52	0.35 – 0.48	l/l
Mean Cell Volume	83 – 103	81 – 102	Fl
Mean Cell Haemoglobin	27 – 34	27 – 34	Pg
Mean Cell Haemoglobin Concentration	304 – 353	298 – 340	g/L
Red Cell Distribution Width (RDW-CV)	12.2 – 14.8		%
Platelets	150 – 400		$x10^9$/L
Mean Platelet Volume	9 – 12		fL
Immature Platelet Fraction	0.9 – 11.2		%
Platelet Distribution Width	9 – 16		fl
White Cell Count	3.26 – 11.2	3.0 – 10.9	$x10^9$/L
Differential			
Neutrophils	1.5 – 7.0	1.5 – 7.1	$x10^9$/L
Lymphocytes	0.5 – 4.0	0.6 – 4.0	$x10^9$/L
Monocytes	0.3 – 0.9	0.24 – 0.9	$x10^9$/L
Eosinophils	0.03 – 0.61	0.03 – 0.51	$x10^9$/L
Basophils	0.05 – 0.1	0.05 – 0.1	$x10^9$/L
Retic Count	46 – 105	33 – 102	$x10^9$/L
Retic He	25.9 – 38		pg
Immature Reticulocyte Fraction (IRF)	1.9 – 17.8		%
ESR			
17-50 years	2 – 10	2 – 12	mm/hour
51-60 years	2 – 12	2 – 19	mm/hour
61-70	2 – 14	2 – 20	mm/hour
>70	2 – 30	2 – 35	mm/hour
Plasma Viscosity			
PV	1.50 – 1.72		mPa's
Glucose-6-Phosphate Dehydrogenase			
G6PD	8.8 – 12.8		IU/gHb
Glycated Haemoglobin			
HbA1c	20 – 42		mmol/mol
Haemoglobinopathy			
Hb A2	1.5 – 3.5		%
Hb F (Non Pregnant Adult)	0.1 – 1.6		%
Hb F (Pregnant Adult)	<5.0		%
Any amount of any variant other than Hb A, Hb A2 or HbF is abnormal			
Coagulation	**Male**	**Female**	**Units**
Prothrombin Time (PT)	10 – 14		Seconds
INR	0.8 – 1.2		Ratio

Partial Thromboplastin Time	23 – 34	Seconds
Partial Thromboplastin Time Ratio (APTT)	0.8 – 1.2	Ratio
Fibrinogen	1.5 – 4.1	g/L
D-Dimer	<250	ng/ml
Thrombin Time	0.8 – 1.2	Ratio
Anti-Xa assay	Dose dependent. Discuss with Haematology Registrar	
Factor Assays		
FII	50 – 129	IU/dL
FV	50 – 135	IU/dL
FVII	50 – 170	IU/dL
FVIII	50 – 158	IU/dL
FIX	50 – 166	IU/dL
FX	50 – 171	IU/dL
FXI	50 – 164	IU/dL
FXII	50 – 183	UdL
Chromogenic Factor VIII (Bovine)	50 – 144	IU/dL
Chromogenic Factor IX (Human)	50 – 125	IU/dL
von Willebrand Screen		
Ristocetin Co-Factor (vWF:RCo)	47 – 154	IU/dL
von Willebrand Factor Antigen (vWF:Ag)	48 – 175	IU/dL
Von Willebrand Factor Collagen Binding Activity (vWF:CBA)	57 – 164	IU/dL
Thrombophilia Screen		
Protein C Function	65 – 171	IU/dL
Free Protein S	75 – 139 | 55 – 125	IU/dL
Antithrombin	83 – 127	IU/dL
Lupus DRVVT Screen Ratio	0.76 – 1.26	Ratio
Lupus Normalised Ratio	0.84 – 1.16	Ratio
Miscellaneous Tests		
HIT Screen (ELISA)	<0.4 Negative; >0.4 – 1.0 weak positive; >1.0 Positive	OD
HIT Screen (AcuStar)	0.0 – 0.99	IU/mL
ADAMTS13 Activity (ELISA)	38 – 110	IU/dL
ADAMTS 13 Activity (AcuStar)	62 – 118	IU/dL
ADAMTS13 Inhibitor (IgG)	<12 Negative 12–15 Borderline >15 Positive	u/ml
Bethesda Assay (Human and Porcine)	Negative <0.6 Low titre inhibitor <5.0 High–titre inhibitor >5.0	BU/ml
Emicizumab Assay	40 – 60	µg/ml
Argatroban	0.4 – 1.2	µg/ml
Dabigatran	117– 275	ng/ml

FBC Ranges adapted from B Bain Blood Cells-A Practical Guide 5th Ed and J.V Dacie & S.M Lewis Practical Haematology 12th Edition and following verification of new method. Measurement Uncertainty of measured quality values available on request from Laboratory