

Coagulation Reference Ranges

TEST (All sexes and age unless stated)	Reference Range	Source	Units
Prothrombin Time (adult)	10.1 – 11.6	L	seconds
APTT Actin FS (adult)	20.0 – 27.0	L	seconds
Clauss Fibrinogen (adult)	1.9 – 4.0	L	g/L
D-Dimer (PE / VTE cut-off)	Age adjusted cut off	Lit/L	ng/mL FEU
Lupus Inhibitor Screen	< 1.20	M	(ratio)
Factor II (adult)	0.7 – 1.5	M	IU/mL
Factor V (adult)	0.5 – 1.5	M	IU/mL
Factor VII (adult)	0.5 – 1.5	M	IU/mL
Factor VIII (adult)	0.6 – 1.5	M/L	IU/mL
Chromogenic Factor VIII (Human & Bovine)	0.6 – 1.5	M/L	IU/mL
Factor VIII Inhibitors	< 0.6	Lit	NBU/mL
Factor IX (adult)	0.6 – 1.5	M/L	IU/mL
Factor X (adult)	0.7 – 1.5	M	IU/mL
Factor XI (adult)	0.6 – 1.5	M	IU/mL
Factor XII (adult)	0.6 – 1.5	M	IU/mL
Antithrombin Activity (adult)	80 – 130	M/L	IU/dL
Protein C Activity (adult)	70 – 140	M/L	IU/dL
Protein S Free (adult Male)	75 – 145	M/L	IU/dL
Protein S Free (adult Female)	55 – 125	M/L	IU/dL
Thrombin Time	12 – 16.5	M/L	seconds
vWF Activity (vWF:GP1b)	0.5 – 1.5	Lit	IU/mL
vWF Antigen (vWF:Ag)	0.5 – 1.5	Lit	IU/mL
vWF Collagen Binding Assay (vWF:CBA)	0.5 – 1.5	Lit	IU/mL
HIT-IgG (PF4-H) Assay	0 – 0.99	M	U/mL

Reference Range Sources: **M**: Manufacturer's quoted range; **L** Locally derived range; **Lit** Literature; **M/L** Manufacturers range confirmed / amended following local verification

D-Dimer age adjusted PE / VTE cut-off

The age adjusted D-dimer is calculated using 5 x patient's age, with a reported cutoff for 5 yearly intervals calculated using the median age.

Age	Age adjusted D-dimer (ng/mL FEU)
≤ 50	500
51 – 55	530
56 – 60	580
61 – 65	630
66 – 70	680
71 – 75	730
76 – 80	780
81 – 85	830
86 – 90	880
91 – 95	930
> 95	980

Paediatric Coagulation Reference Ranges

TEST	AGE					
	< 4 weeks	1-5 months	6-11 months	1-5 years	6-10 years	11-17 years
PT (sec)	9.5 - 12.6	9.7 - 12.8	9.8 - 13.0	9.9 - 13.4	10 - 14.6	10 - 14.1
APTT actin FS (sec)	27.6 - 45.6	24.8 - 40.7	25.1 - 40.7	24.0 - 39.2	26.9 - 38.7	24.6 - 38.4
Clauss Fibrinogen (g/L)	1.36 - 3.00	1.41 - 4.37	1.41 - 4.37	1.64 - 4.97	1.71 - 5.37	1.68 - 5.29
Antithrombin (IU/dL)	32.8 - 62.8	29.0 - 120.0	63.0 - 121.8	60.5 - 128.3	64.2 - 136.4	69.1 - 135.9
Protein C (IU/dL)	27.2 - 48.0	22.8 - 95.0	46.6 - 150.9	59.1 - 147.5	45.9 - 153.5	72.3 - 155.1
Protein S (IU/dL)	61.0 - 108.0	48.0 - 126.5	63.0 - 138.9	53.0 - 134.9	61.5 - 141.7	61.4 - 130.7

Paediatric Reference Range Source: **Lit** Literature: Toulon P, Berruyer B and Brionne-Francois M, et al. Age dependency for coagulation parameters in paediatric populations. *Thrombosis and Haemostasis* 2016; 116: 9-16.

***** Notify York and Scarborough Hospitals Trust website of any changes to Coagulation Reference Ranges:
<https://www.yorkhospitals.nhs.uk/our-services/a-z-of-services/laboratory-medicine1/haematology-/>**