

REFERENCE VALUES FOR COMMONLY ORDERED BLOOD TESTS

Analyte	Reference value	
	Conventional units	SI units
Antithrombin III		
Antigenic	22–39 mg/dL	220–390 mg/liter
Functional	80–130%	0.8–1.30 U/liter
Bleeding time	2.0–9.5 min	2.0–9.5 min
Erythrocyte count		
Male	$4.50\text{--}5.90 \times 10^6/\text{mm}^3$	$4.50\text{--}5.90 \times 10^{12}/\text{liter}$
Female	$4.00\text{--}5.20 \times 10^6/\text{mm}^3$	$4.00\text{--}5.20 \times 10^{12}/\text{liter}$
Erythrocyte sedimentation rate		
Male	0–17 mm/hr	0–17 mm/hr
Female	1–25 mm/hr	1–25 mm/hr
Ferritin		
Male	30–300 ng/mL	30–300 µg/liter
Female	10–200 ng/mL	10–200 µg/liter
Fibrinogen	150–400 mg/dL	1.50–4.00 g/liter
Folate (folic acid)		
Normal	3.1–17.5 ng/mL	7.0–39.7 nmol/liter
Borderline deficient	2.2–3.0 ng/mL	5.0–6.8 nmol/liter
Deficient	<2.2 ng/mL	<5.0 nmol/liter
Excess	>17.5 ng/mL	>39.7 nmol/liter
Folic acid	150–450 ng/mL/cells	340–1020 nmol/liter/cells
Hematocrit		
Male	41.0–53.0%	0.41–0.53
Female	36.0–46.0%	0.36–0.46
Hemoglobin		
Plasma	1–5 mg/dL	0.01–0.05 g/liter
Whole blood, male	13.5–17.5 g/dL	8.4–10.9 mmol/liter
Whole blood, female	12.0–16.0 g/dL	7.4–9.9 mmol/liter
Hemoglobin electrophoresis		
Hemoglobin A	95–98%	0.95–0.98
Hemoglobin A _{1c}	3.8–6.4%	0.038–0.064 Hg fraction
Hemoglobin A ₂	1.5–3.5%	0.015–0.035
Hemoglobin F	0–2.0%	0–0.02
Hemoglobins other than A, A ₂ , or F	Absent	Absent
Iron (hematology and coagulation values)	30–160 µg/dL	5.4–28.7 µmol/liter
Iron-binding capacity (hematology and coagulation values)	228–428 µg/dL	40.8–76.7 µmol/liter
Iron (clinical chemistry values)	50–150 µg/dL	9–27 µmol/liter
Iron-binding capacity (clinical chemistry values)	250–370 µg/dL	45–66 µmol/liter
Leukocyte count (WBC)	$4.5\text{--}11.0 \times 10^3/\text{mm}^3$	$4.5\text{--}11 \times 10^9/\text{liter}$
Mean corpuscular hemoglobin (MCH)	26.0–34.0 pg/cell	26.0–34.0 pg/cell
Mean corpuscular hemoglobin concentration (MCHC)	31.0–37.0 g/dL	310–370 g/liter
Mean corpuscular volume (MCV)	80–100 µm ³	80–100 fl
Partial-thromboplastin time (activated)	22.1–35.1 sec	22.1–35.1 sec
Platelet count	$150\text{--}350 \times 10^3/\text{mm}^3$	$150\text{--}350 \times 10^9/\text{liter}$
Prothrombin time	11.1–13.1 sec	11.1–13.1 sec
Reticulocyte count	0.5–2.5% red cells	0.005–0.025 red cells
Transferrin	230–390 mg/dL	2.3–3.9 g/liter
Vitamin B ₁₂		
Normal	>250 pg/mL	>185 pmol/liter
Borderline	125–250 pg/mL	92–185 pmol/liter
Deficient	<125 pg/mL	<92 pmol/liter

NOTES

National Institutes of Health. Third report of the Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III). September 2002. Available at: www.nhlbi.nih.gov/guidelines/cholesterol/index.htm.

Accessed August 2012.

(Rev. 8/2012)