

Representative Laboratory Reference Values: Blood, Plasma, and Serum

Test	Specimen	Conventional Units	SI Units
Acetoacetate	Plasma	< 3 mg/L	< 0.3 mmol/L
Acetylcholinesterase (AChE), red blood cells	Blood	26.7–49.2 U/g Hb	1.72–3.17 x 10 ⁶ U/mol Hb
Acid phosphatase (adults)	Serum	0.5–5 U/L	8–83 nkat/L
Activated partial thromboplastin time (aPTT)	Plasma	30–40 seconds	—
Adrenocorticotrophic hormone (ACTH)	Serum	9–52 pg/mL (morning draw)	2–11 pmol/L (morning draw)
Albumin	Serum	3.5–5.4 g/dL	35–54 g/L
Aldosterone:			
	Serum	7–20 ng/dL	194–554 pmol/L
Alkaline phosphatase (ALP)	Serum	36–150 U/L	0.5–2.5 mckat/L
Alpha-1 antitrypsin (AAT)	Serum	100–273 mg/dL	18–50 mmol/L
Alpha fetoprotein (AFP)	Serum	< 20 ng/mL	< 20 mcg/L
Aminolevulinic acid, Delta (ALA)	Serum	15–23 mcg/L	1.14–1.75 mmol/L
Aminotransferase, alanine (ALT)	Serum	< 35 U/L	< 0.58 mckat/L

*[American Board of Internal Medicine](#): ABIM Laboratory Test Reference Ranges—July 2021. Accessed 9/16/2021.

mckat = microkatal; pkat = picokatal.

▸ Standing

▸ Supine

Serum

2–5 ng/dL

55–138 pmol/L

Test	Specimen	Conventional Units	SI Units
Aminotransferase, aspartate (AST)	Serum	< 35 U/L	< 0.58 mckat/L
Ammonia	Plasma	40–80 mcg/dL	23–47 mmol/L
Amylase	Serum	< 110 U/L	< 1.8 mckat/L
Antibodies to extractable nuclear antigen (AENA)	Serum	< 20.0 units/mL	—
Anti-cyclic citrullinated peptide (anti-CCP) antibodies	Serum	≤ 20 units/mL	—
Antidiuretic hormone (ADH; arginine vasopressin)	Plasma	< 1.7 pg/mL	< 1.57 pmol/L
Anti-double-stranded DNA (dsDNA) antibodies, IgG	Serum	< 25 IU	—
Antimitochondrial M2 antibodies	Serum	< 0.1 units	—
Antineutrophil cytoplasmic antibodies (cANCA)	Serum	Negative	—
Antinuclear antibodies (ANA)	Serum	≤ 1.0 units	—

Anti-smooth muscle antibodies (ASMA) titer	Serum	$\leq 1:80$	—
Antistreptolysin O titer	Serum	< 150 units	—
Antithyroid microsomal antibody titer	Serum	$< 1:100$	—
+Antitrypsin, Alpha-1 (AAT)	Serum	83–199 mg/dL	15.3–36.6 mmol/L

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Test	Specimen	Conventional Units	SI Units
Apolipoproteins:			

Blood 25–35 mL/kg body wt

0.025–0.035 L/kg body wt

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▸ A-I, females	Serum	98–210 mg/dL	0.98–2.1 g/L
▸ A-I, males	Serum	88–180 mg/dL	0.88–1.8 g/L
▸ B-100, females	Serum	44–148 mg/dL	0.44–1.48 g/L
▸ B-100, males	Serum	55–151 mg/dL	0.55–1.51 g/L
Bicarbonate	Serum	23–28 mEq/L	23–28 mmol/L
Bilirubin:			
▸ Direct	Serum	0–0.3 mg/dL	0–5.1 mcmol/L
▸ Total	Serum	0.3–1.2 mg/dL	5.1–20.5 mcmol/L
Blood volumes (radioisotope labeling):			
▸ Plasma, females*	Blood	28–43 mL/kg body wt	0.028–0.043 L/kg body wt
▸ Plasma, males*	Blood	25–44 mL/kg body wt	0.025–0.044 L/kg body wt
▸ Red blood cells, females*	Blood	20–30 mL/kg body wt	0.02–0.03 L/kg body wt

Test	Specimen	Conventional Units	SI Units
Red blood cells, males*			
Brain (B-type) natriuretic peptide (BNP)	Plasma	< 100 pg/mL	< 100 ng/L
Calcitonin, age ≥ 16 years:			
Females			
Males	Serum	< 16 pg/mL	< 16 ng/L
Serum		< 8 pg/mL	< 8ng/L
Calcium	Serum	9–10.5 mg/dL	2.2–2.6 mmol/L
Cancer antigen (CA):			
CA 125			
CA 15-3	Serum	< 30 U/mL	< 30 kU/L
Serum		< 35 U/mL	< 35 kU/L
Carbon dioxide (CO ₂) content	Serum	23–28 mEq/L	23–28 mmol/L
Carbon dioxide partial pressure (PCO ₂)	Blood	Arterial: 35–45 mm Hg Venous: 38–50 mm Hg	Arterial: 4.7–6.0 kPa Venous: 5.1–6.7 kPa
Carboxyhemoglobin	Plasma	0.5–5%	—
Carcinoembryonic antigen (CEA)	Serum	< 3 ng/mL Patients who smoke: < 5 ng/mL	< 3 mcg/L Patients who smoke: < 5 mcg/L
Carotene	Serum	75–300 mcg/dL	1.4–5.6 mcmol/L

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Test	Specimen	Conventional Units	SI Units
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Test	Specimen	Conventional Units	SI Units
CD4:CD8 ratio	Blood	1.0–4.0	—
CD4+ T-cell count	Blood	640–1175/mcL	$0.64\text{--}1.18 \times 10^9/\text{L}$
CD8+ T-cell count	Blood	335–875/mcL	$0.34\text{--}0.88 \times 10^9/\text{L}$
Ceruloplasmin	Serum	14–40 mg/dL	0.93–2.65 mcmol/L
Total (TC)	Plasma	150–199 mg/dL	3.88–5.15 mmol/L
Coagulation factors:			
Chloride	Serum	98–106 mEq/L	98–106 mmol/L
Cholesterol, desirable level:			

▸ High-density lipoprotein (HDL-C)

▸ Low-density lipoprotein (LDL-C)

Plasma

Plasma

≤ 130 mg/dL

≤ 3.36 mmol/L

≥ 40 mg/dL

≥ 1.04 mmol/L

▸ Factor I

Plasma

150–300 mg/dL

1.5–3.5 g/L

▸ Factor II

Plasma

60–150% of normal

—

▸ Factor IX

Plasma

60–150% of normal

—

▸ Factor V

Plasma

60–150% of normal

—

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Test	Specimen	Conventional Units	SI Units
Factor VII	Plasma	60–150% of normal	—
Factor VIII	Plasma	60–150% of normal	—
Factor X	Plasma	60–150% of normal	—
Factor XI	Plasma	60–150% of normal	—
Factor XII	Plasma	60–150% of normal	—
Complement:			
C3	Serum	90–180 mg/dL	0.9–1.8 g/L
C4	Serum	10–40 mg/dL	0.10–0.40 g/L
Total (CH50)	Serum	30–75 U/mL	30–75 kU/L
Copper	Serum	70–155 mcg/L	11–24.3 mcmol/L
Cortisol:			
1 hour after cosyntropin	Serum	> 18 mcg/dL and usually ≥ 8 mcg/dL above baseline	> 498 nmol/L and usually ≥ 221 nmol/L above baseline
At 5 PM	Serum	3–13 mcg/dL	83–359 nmol/L

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Test	Specimen	Conventional Units	SI Units
At 8 AM	Serum	8–20 mcg/dL	251–552 nmol/L
After overnight suppression test	Serum	< 5 mcg/dL	< 138 nmol/L
C-peptide	Serum	0.9–4.3 ng/mL	297–1419 pmol/L
C-reactive protein (CRP)	Serum	< 0.8 mg/dL	< 8.0 mg/L
C-reactive protein, highly sensitive (hsCRP)	Serum	< 0.2 mg/dL	< 2.0 mg/L
Creatine kinase (CK)	Serum	30–170 U/L	0.5–2.83 mckat/L
Creatinine	Serum	Men: 0.7–1.2 mg/dL Women: 0.5–1.0 mg/dL	Men: 60–110 mcmol/L Women: 45–90 mcmol/L
D-dimer	Plasma	≤ 500 ng/mL FEU (Fibrinogen Equivalent Units)	< 3 nmol/L FEU
Dehydroepiandrosterone sulfate (DHEA-S):			
Females			
Males	Plasma	1.3–5.5 mg/mL	3.5–14.9 mcmol/L
Plasma		0.6–3.3 mg/mL	1.6–8.9 mcmol/L
Delta-aminolevulinic acid (ALA)	Serum	15–23 mcg/L	1.14–1.75 mcmol/L
11-Deoxycortisol (DOC):			
After metyrapone			
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Plasma		> 7 mcg/dL	> 203 nmol/L
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Test	Specimen	Conventional Units	SI Units
Basal	Plasma	< 5 mcg/dL	< 145 nmol/L
D-Xylose level 2 hours after ingestion of 25 g of D-xylose	Serum	> 20 mg/dL	> 1.3 nmol/L
Epinephrine, supine	Plasma	< 75 ng/L	< 410 pmol/L
Erythrocyte sedimentation rate (ESR):			
Females			
Males			
Blood	Blood	0–15 mm/hour	0–20 mm/hour
		0–20 mm/hour	0–20 mm/hour
Erythropoietin	Serum	2.6–18.5 mIU/mL	2.6–18.5 IU/L
Estradiol, females:			
Day 1–10 of menstrual cycle	Serum	14–27 pg/mL	50–100 pmol/L
Day 11–20 of menstrual cycle	Serum	14–54 pg/mL	50–200 pmol/L
Day 21–30 of menstrual cycle	Serum	19–40 pg/mL	70–150 pmol/L
Estradiol, males	Serum	10–30 pg/mL	37–110 pmol/L
Ferritin:			
	Serum	30–200 ng/mL	30–200 mcg/L

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Test	Specimen	Conventional Units	SI Units
▸ Females			
▸ Males	Serum	30–300 ng/mL	30–300 mcg/L
Fetoprotein, Alpha (AFP)	Serum	< 8.4 ng/mL	< 8.4 mcg/L
Fibrinogen	Plasma	150–350 mg/dL	1.5–3.5 g/L
Folate (folic acid):			
▸ Red blood cells	Blood	160–855 ng/mL	362–1937 nmol/L
▸ Serum	Serum	2.5–20 ng/mL	5.7–45.3 nmol/L
Follicle-stimulating hormone (FSH), females:			
▸ Follicular or luteal phase	Serum	5–20 mU/mL	5–20 U/L
▸ Midcycle peak	Serum	30–50 mU/mL	30–50 U/L
▸ Postmenopausal	Serum	> 35 mU/mL	> 35 U/L
Follicle-stimulating hormone (FSH), adult males	Serum	5–15 mU/mL	5–15 U/L
Fructosamine (glycated protein)	Plasma	200–285 mcmol/L	200–285 mcmol/L
Gamma-glutamyl transpeptidase (GGT)	Serum	Adult male: 8–61 U/L Adult female: 5–36 U/L	Adult male: 0.14–1.03 mckat/L

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Test	Specimen	Conventional Units	SI Units
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Test	Specimen	Conventional Units	SI Units
			Adult female:0.09–0.61 mckat/L
Gastrin	Serum	0–180 pg/mL	0–180 ng/L
Globulins:	Serum	2.5–3.5 g/dL	25–35 g/L
▸ Alpha-1 globulins	Serum	0.2–0.4 g/dL	2–4 g/L
▸ Alpha-2 globulins	Serum	0.5–0.9 g/dL	5–9 g/L
▸ Beta globulins	Serum	0.6–1.1 g/dL	6–11 g/L
▸ Beta-2 microglobulin	Serum	0.7–1.8 mcg/mL	0.7–1.8 mg/L
▸ Gamma globulins	Serum	0.7–1.7 g/dL	7–17 g/L
Glucose:			
▸ 2-hour postprandial	Plasma	< 140 mg/dL	< 7.8 mmol/L
▸ Fasting	Plasma	70–105 mg/dL	3.9–5.8 mmol/L
Glucose-6-phosphate dehydrogenase (G6PD)	Blood	5–15 U/g Hb	0.32–0.97 mU/ mol Hb
Glutamyl transpeptidase, Gamma (GGT)	Serum	Adult male: 8–61 U/L Adult female: 5–36 U/L	Adult male: 0.14–1.03 mckat/L

Test	Specimen	Conventional Units	SI Units
			Adult female: 0.09–0.61 mckat/L
Growth hormone:			
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▸ After oral glucose			
▸ In response to provocative stimuli			
Plasma	Plasma	> 7 ng/mL < 2 ng/mL	> 7 mcg/L < 2 mcg/L
Haptoglobin	Serum	30–200 mg/dL	0.3–2 g/L
Hematocrit:			
▸ Females	Blood	36–47%	—
▸ Males	Blood	41–51%	—
Hemoglobin:			
▸ Females	Blood	12–16 g/dL	120–160 g/L
▸ Males	Blood	14–17 g/dL	140–170 g/L
Hemoglobin A1C	Blood	4.7–8.5%	—
Hemoglobin electrophoresis, adults:			

▸ Hb A1

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Blood		95–98%	—
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▸ Hb A2	Blood	2–3%	—
▸ Hb C	Blood	0%	—
▸ Hb F	Blood	0.8–2.0 %	—
▸ Hb S	Blood	0%	—
Hemoglobin electrophoresis, Hb F in children:			
▸ Neonate	Blood	50–80%	—
▸ 1–6 months	Blood	8%	—
▸ > 6 months	Blood	1–2%	—
Homocysteine:			
▸ Females	Plasma	0.40–1.89 mg/L	3–14 mcmol/L
▸ Males	Plasma	0.54–2.16 mg/L	4–16 mcmol/L
Human chorionic gonadotropin (hCG),	Serum quantitative	< 5 mIU/mL	< 5 IU/L
Immunoglobulins:			

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Test	Specimen	Conventional Units	SI Units
▸ IgA	Serum	70–300 mg/dL	0.7–3.0 g/L
▸ IgD	Serum	< 8 mg/dL	< 80 mg/L
▸ IgE	Serum	0.01–0.04 mg/dL	0.1–0.4 mg/L
▸ IgG	Serum	640–1430 mg/dL	6.4–14.3 g/L
▸ IgG1	Serum	280–1020 mg/dL	2.8–10.2 g/L
▸ IgG2	Serum	60–790 mg/dL	0.6–7.9 g/L
▸ IgG3	Serum	14–240 mg/dL	0.14–2.4 g/L
▸ IgG4	Serum	11–330 mg/dL	0.11–3.3 g/L
▸ IgM	Serum	20–140 mg/dL	0.2–1.4 g/L
Insulin, fasting	Serum	2.6–24.9 mIU/mL	15.6–149.4 pmol/L
International normalized ratio (INR):			
▸ Therapeutic range (standard intensity therapy)	Plasma	2.0–3.0	—

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▸ Therapeutic range in higher risk patients (eg,	Plasma	2.5–3.5	—
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Test	Specimen	Conventional Units	SI Units
those with prosthetic heart valves)			
Therapeutic range in patients with lupus Plasma 3.0–3.5 — anticoagulant			
Iron	Serum	Males: 50–150 mcg/dL Females: 35–145 mcg/dL	Males: 9.2–27.5 mcmol/L Females: 6.4–26.5 mcmol/L
Iron-binding capacity, total (TIBC)	Serum	250–460 mcg/dL	45–82 mcmol/L
Lactate dehydrogenase (LDH)	Serum	60–160 U/L	1–1.67 mckat/L
Lactic acid, venous	Blood	6–16 mg/dL	0.67–1.8 mmol/L
Lactose tolerance test	Plasma	> 15 mg/dL increase in plasma glucose level	> 0.83 mmol/L increase in plasma glucose level
Lead	Blood	Pediatric patients: < 20 mcg/dL Adult patients: < 80 mcg/dL	Pediatric patients: < 0.97 mcmol/L Adult patients: < 3.86 mcmol/L
Leukocyte alkaline phosphatase (LAP) score	Peripheral blood smear	13–130/100/ polymorphonuclear (PMN) leukocyte neutrophils and bands	—
Lipase	Serum	< 95 U/L	< 1.58 mckat/L
Lipoprotein (a) [Lp(a)]	Serum	≤ 10 mg/dL	< 13nmol/L
Luteinizing hormone (LH), females:			

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▸ Follicular or luteal phase	Serum	5–22 mU/mL	5–22 U/L
▸ Midcycle peak	Serum	30–250 mU/mL	30–250 U/L
▸ Postmenopausal	Serum	> 30 mU/mL	> 30 U/L
Luteinizing hormone, males	Serum	3–15 mU/mL	3–15 U/L
Magnesium	Serum	1.5–2.4 mg/dL	0.62–0.99 mmol/L
Manganese	Serum	0.3–0.9 ng/mL	5.5–16.4 nmol/L
Mean corpuscular hemoglobin (MCH)	Blood	28–32 pg	—
Mean corpuscular hemoglobin concentration (MCHC)	Blood	32–36 g/dL	320–360 g/L
Mean corpuscular volume (MCV)	Blood	80–100 fL	—
Metanephrines, fractionated:			
▸ Metanephrines, free			
▸ Normetanephrines, free	Plasma	< 0.90 nmol/L	—
Plasma		< 0.50 nmol/L	—
Methemoglobin	Blood	< 1.0%	—

Test	Specimen	Conventional Units	SI Units
Methylmalonic acid (MMA)	Serum	≤ 400 nmol/L	47.2 ng/L
Myoglobin:			
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Females			
Males Serum	Serum	28–72 mcg/L	1.6–4.1 nmol/L
		25–58 mcg/L	1.4–3.5 nmol/L
Norepinephrine, supine	Plasma	50–440 pg/mL	0.3–2.6 nmol/L
N-Terminal propeptide of BNP (NT-proBNP)	Plasma	< 75 years: < 125 pg/mL ≥ 75 years: < 450 pg/mL	< 125 ng/L < 450 ng/L
5'-Nucleotidase (5'NT)	Serum	4–11.5 U/L	—
Osmolality	Plasma	275–295 mOsm/kg H ₂ O	275–295 mmol/ kg H ₂ O
Osmotic fragility test	Blood	Increased fragility if hemolysis occurs in > 0.5% sodium chloride Decreased fragility if hemolysis is incomplete in 0.3% sodium chloride	—
Oxygen partial pressure (PO ₂)	Blood	Arterial: 80–100 mm Hg	10.7–13.3 kPa
Parathyroid hormone (PTH)	Serum	10–65 pg/mL	10–65 ng/L
Parathyroid hormone–related peptide (PTHrP)	Plasma	< 2.0 pmol/L	—
Partial thromboplastin time, activated (aPTT)	Plasma	25–35 seconds	—
pH	Blood	Arterial: 7.35–7.45	—
		Venous: 7.32–7.43	—

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Test	Specimen	Conventional Units	SI Units
Phosphorus, inorganic	Serum	3.0–4.5 mg/dL	0.97–1.45 mmol/L
Platelet count	Blood	150–350 x 10 ³ /mcL	150–350 x 10 ⁹ /L
Platelet life span, using chromium-51 (51Cr)	—	8–12 days	—
skip to main content Porphyrins	Plasma	≤ 1.0 mcg/dL	≤ 10 mcg/L
Potassium	Serum	3.5–5 mEq/L	3.5–5 mmol/L
Prealbumin (transthyretin)	Serum	18–45 mg/dL	180–450 mg/L
Progesterone:			
▸ Follicular phase	Serum	< 1 ng/mL	< 0.03 nmol/L
▸ Luteal phase	Serum	3–30 ng/mL	0.1–0.95 nmol/L
Prolactin:			
▸ Females (nonpregnant)	Serum	< 20 mcg/L	< 870 pmol/L
▸ Males	Serum	< 15 mcg/L	< 652 pmol/L
Prostate-specific antigen, total (PSA-T)	Serum	0–4 ng/mL	0–4 mcg/L

Prostate-specific antigen, ratio of free to total

Serum

> 0.25

—

(PSA-F:PSA-T)

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Test	Specimen	Conventional Units	SI Units
Protein C activity	Plasma	67–131%	—
Protein C resistance, activated ratio (APC-R)	Plasma	2.2–2.6	—
Protein S activity	Plasma	82–144%	—
Protein, total	Serum	6–7.8 g/dL	60–78 g/L
Prothrombin time (PT)	Plasma	11–13 seconds	—
Pyruvic acid	Blood	0.08–0.16 mmol/L	—
Red blood cell count	Blood	$4.2\text{--}5.9 \times 10^6$ cells/mcL	$4.2\text{--}5.9 \times 10^{12}$ cells/L
Red blood cell survival rate, using ^{51}Cr	Blood	$T_{1/2} = 28$ days	—
Renin activity, plasma (PRA), upright, in males and females aged 18–39 years:			

▸ Sodium-depleted	Plasma	2.9–24 ng/mL/hour	2.9–24 mcg/L/hour
▸ Sodium-repleted	Plasma	0.6 (or lower)–4.3 ng/mL/hour	0.6 (or lower)–4.3 mcg/L/hour
Reticulocyte count:			
▸ Percentage	Blood	0.5–1.5 %	—
▸ Absolute	Blood	23–90 $\times 10^3$ /mCL	23–90 $\times 10^9$ /L
Rheumatoid factor (RF), by nephelometry	Serum	< 20 IU/mL	< 20 kIU/L

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Test	Specimen	Conventional Units	SI Units
Sodium	Serum	136–145 mEq/L	136–145 mmol/L
Testosterone (total), adults:			
▸ Females			
▸ Males	Serum	300–1200 ng/dL	10–42 nmol/L
Serum		20–75 ng/dL	0.7–2.6 nmol/L
Thrombin time	Plasma	18.5–24 seconds	—
Thyroid iodine-123 (123I) uptake	—	5–30% of administered dose at 24 hour	—
Thyroid-stimulating hormone (TSH)	Serum	0.5–5.0 mIU/mL	0.5–5.0 mIU/L
Thyroxine (T4):			

▸ Free	Serum	0.9–2.4 ng/dL	12–31 pmol/L
▸ Free index	—	4–11	—
▸ Total	Serum	5–12 mcg/dL	64–155 nmol/L
Transferrin	Serum	200–360 mg/dL	2.0–3.6 g/L
Transferrin saturation	Serum	20–50%	—
Triglycerides (fasting)	Serum	Normal: < 150 mg/dL Borderline: 150–199 mg/dL High: 200–499 mg/dL	Normal: < 1.69 mmol/L Borderline: 1.69–2.25 mmol/L

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Test	Specimen	Conventional Units	SI Units
		Very high: ≥ 500 mg/dL	High: 2.26–5.64 mmol/L Very high: > 5.65 mmol/L
Triiodothyronine (T3):			
▸ Uptake			
▸ Total	Serum	70–195 ng/dL	1.1–3.0 nmol/L
Serum		25–35%	—
Troponin I (Contemporary assay)	Plasma	< 0.04 ng/mL	< 0.04 mcg/L
Troponin I, highly sensitive (hs-TnI)	Serum	Females: ≤ 10 ng/L Males: ≤ 15 ng/L	<1.0 mcg/L <1.5 mcg/L

Troponin T (Contemporary assay)	Serum	≤ 0.03 ng/mL	≤ 0.03 mcg/L
Troponin T, highly sensitive (hs-TnT)	Serum	Females: ≤ 10 ng/L Males: ≤ 15 ng/L	<1.0 mcg/L <1.5 mcg/L
Urea nitrogen (BUN)	Serum	8–20 mg/dL	2.9–7.1 mmol/L
Uric acid	Serum	2.5–8 mg/dL	0.15–0.47 mmol/L
Vitamin B12	Serum	200–800 pg/mL	148–590 pmol/L
Vitamin C (ascorbic acid):			
▸ Leukocyte	Blood	< 20 mg/dL	< 1136 mcmol/L
▸ Total	Blood	0.4–1.5 mg/dL	23–85 mcmol/L

* [American Board of Internal Medicine](#) ABIM Laboratory Test Reference Ranges July 2021. Accessed 9/16/2021.

mckat = microkatal; pkat = picokatal.

Test	Specimen	Conventional Units	SI Units
Vitamin D:			
▸ 1,25-Dihydroxycholecalciferol (calcitriol)			
▸ 25-Hydroxycholecalciferol	Serum	15–80 ng/mL	37–200 nmol/L
Serum		25–65 pg/mL	65–169 pmol/L
White blood cell count	Blood	4.5–11 x 10 ³ cells/mcL	4.5–11 x 10 ⁹ cells/L
Segmented neutrophils		2.6–8.5 x 10 ³ cells/mcL	2.6–8.5 x 10 ⁹ cells/L
Band neutrophils		0–1.2 x 10 ³ cells/mcL	0–1.2 x 10 ⁹ cells/L

Lymphocytes		$0.77\text{--}4.5 \times 10^3$ cells/mcL	$0.77\text{--}4.5 \times 10^9$ cells/L
Monocytes		$0.14\text{--}1.3 \times 10^3$ cells/mcL	$0.14\text{--}1.3 \times 10^9$ cells/L
Eosinophils		$0\text{--}0.55 \times 10^3$ cells/mcL	$0\text{--}0.55 \times 10^9$ cells/L
Basophils		$0\text{--}0.22 \times 10^3$ cells/mcL	$0\text{--}0.22 \times 10^9$ cells/L
Zinc	Serum	66–110 mcg/dL	10.1–16.8 mcmol/L

*[American Board of Internal Medicine](#): ABIM Laboratory Test Reference Ranges—July 2021. Accessed 9/16/2021.

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