

TABLE OF REFERENCE INTERVALS

Specimen	Test	Reference interval (conventional units)	Reference interval (SI units)	Conversion factor (multiply by)	Reference interval (SI units)
S	Albumin	3.8-5.0 g/dL	38-50 g/L	10	
B	Base excess	-3.3 to +2.3 mmol/L	-3.3 to +2.3 mmol/L	1	
P	Bicarbonate	21-28 mmol/L	21-28 mmol/L	1	
S/P	Bilirubin, conjugated	<0.3 mg/dL	<5 µmol/L	17.1	
S/P	Bilirubin, total	0.1-1.2 mg/dL	2-21 µmol/L	17.1	
S/P	Calcium, total	9.2-11.0 mg/dL	2.3-2.8 mmol/L	0.25	
S/P	CO ₂ content, venous	24-30 mmol/L	24-30 mmol/L	1	
P	Chloride	95-103 mEq/L	95-103 mmol/L	1	
S/P	Cholesterol (NCEP recommendation)	140-200 mg/dL	3.6-5.2 mmol/L	0.0259	
P	Cortisol (a.m.)	5-23 µg/dL	138-635 nmol/L	27.6	
S/P	Creatinine	0.6-1.2 mg/dL	53-106 µmol/L	88.4	
	Creatinine clearance	87-139 mL/min/1.74 M ²	1.4-2.3 mL/s	0.0167	
S/P	Ferritin (men)	15-200 ng/mL	15-200 µg/L	1	
S/P	Ferritin (women)	12-150 ng/mL	12-150 µg/L	1	
P	Fibrinogen	200-400 mg/dL	2.00-4.00 g/L	0.01	
S/P	Folate	>2.3 ng/mL	>5.0 nmol/L	2.265	
S/P	Glucose, fasting	70-110 mg/dL	3.9-6.1 mmol/L	0.0556	
S	Haptoglobin	60-270 mg/dL	0.6-2.7 g/L	0.01	
B	Hematocrit (men)	41.5-50.4 %	0.415-0.504 Vol fraction	0.01	
B	Hematocrit (women)	35.9-44.6 %	0.359-0.446 Vol fraction	0.01	
B	Hemoglobin	12-18 g/dL	120-180 g/L	10	
S/P	Iron, total	60-150 µg/dL	10.7-26.9 µmol/L	0.179	
S/P	Iron binding capacity	250-400 µg/dL	44.8-71.6 µmol/L	0.179	
S/P	Lactic acid, venous (lactate)	5-20 mg/dL	0.6-2.2 mmol/L	0.111	
B	Lead (CDC recommendation)	<10 µg/dL	<0.48 µmol/L	0.048	
S/P	Lithium, therapeutic	0.5-1.4 mEq/L	0.5-1.4 mmol/L	1	
S/P	Magnesium	1.3-2.1 mEq/L	0.65-1.05 mmol/L	0.5	
B	MCH (RBC index)	27.5-33.2 pg/cell	27.5-33.2 pg/cell	1	
B	MCHC (RBC index)	33.4-35.5 %	0.334-0.355 concentration fract	0.01	
B	MCV (RBC index)	80-96 fL	80-96 fL	1	
S/P	Osmolality	280-295 mOsm/kg	280-295 mmol/kg	1	
B	pCO ₂ (arterial)	35-40 mm Hg	4.7-5.3 kPa	0.133	
B	pH (arterial)	7.38-7.44	7.38-7.44	1	
S/P	Phosphate (as P)	2.3-4.7 mg/dL	0.74-1.52 mmol/L	0.323	
B	pO ₂ (arterial)	75-100 mm Hg	10-13.3 kPa	0.133	
B	Platelet count	150-400 10 ³ /mm ³	150-400 10 ⁹ /L	10 ⁶	
P	Potassium	3.8-5.0 mEq/L	3.8-5.0 mmol/L	1	
S	Protein, total	6.0-7.8 g/dL	60-78 g/L	10	
B	RBC count (men)	4.5-5.9 10 ⁶ /mm ³	4.5-5.9 10 ¹² /L	10 ⁶	
B	RBC count (women)	4.5-5.1 10 ⁶ /mm ³	4.5-5.1 10 ¹² /L	10 ⁶	
S/P	Salicylate, therapeutic	15-30 mg/dL	1.1-2.2 mmol/L	0.073	
P	Sodium	136-142 mEq/L	136-142 mmol/L	1	
S	Thyroxine, free	0.9-2.3 ng/dL	12-30 pmol/L	13	
S	Thyroxine (T4), total	5.5-12.5 µg/dL	71-161 nmol/L	12.87	
S/P	Triglyceride (as triolein)	10-190 mg/dL	0.11-2.15 mmol/L	0.0113	
S/P	Urea nitrogen (BUN)	8-23 mg/dL	2.9-8.2 mmol/L	0.357	
S/P	Uric acid (urate)	2.7-8.5 mg/dL	0.16-0.51 mmol/L	0.05948	
S	Vitamin B ₁₂	160-950 pg/mL	118-703 pmol/L	0.74	
B	WBC count	4.4-11.0 10 ³ /mm ³	4.4-11.0 10 ⁹ /L	10 ⁶	
S	Zinc	50-150 µg/dL	7.7-23.0 µmol/L	0.153	

Specimens: B, whole blood; P, plasma; S, serum. Reference intervals depend on test method and the demographics of the normal population used.
 Source: Henry JD, ed. *Clinical Diagnosis and Management by Laboratory Methods*. 21st ed. Philadelphia, PA; WB Saunders Co.;2007, and Burstis CA, Ashwood ER, *Tietz Textbook of Clinical Chemistry*, 3rd ed. Philadelphia, PA; WB Saunders Co.;1999.
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