

Example Reference Range Conversions to SI Units from Conventional Units

Component-Blood	Adult Ref Range	Conventional Unit	Conversion Factor	SI Ref Range	SI Unit
ALT female male	10-40	U/L	0.0167	0.17-0.68	ukat/L
Albumin	3.5-5.0	g/dL	10	35-50	g/L
Alkaline Phosphatase	30-120	U/L	0.0167	0.5-2.0	ukat/L
AST	10-30	U/L	0.0167	0.17-0.51	ukat/L
Bilirubin Direct	0.1-0.3	mg/dL	17.10	1.7-5.1	umol/L
Total	0.3-1.2	mg/dL	17.10	5.0-21.0	umol/L
Calcium	8.2-10.2	mg/dL	0.25	2.05-2.55	mmol/L
Chloride	96-106	mEq/L	1.00	96-106	mmol/L
Cholesterol (desirable)	<200	mg/dL	0.0259	<5.18	mmol/L
CO ₂ , Total	21-28	mEq/L	1.00	21-28	mmol/L
Hemogram:					
Hematocrit	41-50	%	0.01	0.41-0.50	Proportion of 1
Hemoglobin	14.0-17.5	g/dL	10.0	140-175	g/L
Platelet Count	150-350 x 10 ³ /L		1.00	150-350 x 10 ⁹ /L	
Red Cell Count	3.9-5.5 x 10 ⁶ /uL		1.00	3.9-5.5 x 10 ¹² /L	
White Cell Count	4500-11000/uL		0.001	4.5-11.0 x 10 ⁹ /L	
Cortisol	5-25	ug/dL	27.588	140-690	nmol/L
Creatinine	0.1-0.4	mg/dL	76.25	8-31	umol/L
Digoxin, Therapeutic	0.5-2.0	ng/mL	1.28	0.6-2.6	nmol/L
Erythrocyte Indices					
MCV	80-100	um ³	1.00	80-100	fL
MCH	26-34	pg/cell	1.00	26-34	pg/cell
MCHC	33-37	g/dL	10.0	330-370	g/L
Ferritin	15-200	ng/mL	2.247	33-450	pmol/L
Folate	3-16	ng/mL	2.266	7-36	nmol/L
FSH	1-100	mIU/L	1.00	1-100	IU/L
Gases, Arterial					
pH	7.35-7.45	pH units	1.00	7.35-7.45	pH units
pCO ₂	35-45	mm Hg	0.133	4.7-5.9	kPa
pO ₂	80-100	mm Hg	0.133	11-13	kPa
Glucose	70-110	mg/dL	0.0555	3.9-6.1	mmol/L
Iron	60-150	ug/dL	0.179	10.7-26.9	umol/L
LD	100-200	U/L	0.0167	1.7-3.4	ukat/L
Magnesium	1.3-2.1	mEq/L	0.50	0.65-1.05	mmol/L
Osmolality	275-295	mOsm/kg	1.00	275-295	mmol/kg
Phenobarbital, therapeutic	15-40	ug/mL	4.31	15-40	umol/L
Phenytoin, therapeutic	10-20	mg/L	3.968	40-79	umol/L
Phosphorus	2.3-4.7	mg/dL	0.323	0.74-1.52	mmol/L
Potassium	3.5-5.0	mEq/L	1.00	3.5-5.0	mmol/L
Protein, Total	6.0-8.0	g/dL	10.0	60-80	g/L
Sodium	136-142	mEq/L	1.00	136-142	mmol/L
Theophylline, therapeutic	10-20	ug/mL	5.55	56-111	umol/L
Thyrotropin (TSH)	0.4-4.2	mIU/L	1.00	0.4-4.2	mIU/L
Thyroxine, free (FT ₄)	0.9-2.3	ng/dL	12.87	12-30	pmol/L
Thyroxine, total (T ₄)	5.5-12.5	ug/dL	12.87	71-160	nmol/L
Transferrin	200-400	mg/dL	0.0123	2.5-5.0	umol/L
Tri-iodothyronine (T ₃)	60-181	ng/dL	0.0154	0.92-2.76	nmol/L
Triglycerides	< 160	mg/dL	0.0113	< 1.8	mmol/L
Urea Nitrogen	8-23	mg/dL	0.357	2.9-8.2	mmol/L
Uric Acid	4.0-8.0	mg/dL	59.485	240-480	umol/L
Vitamin B12	160-950	pg/mL	0.738	118-701	pmol/L

Reference: JAMA Manual of Style: A Guide for Authors and Editors, 10th ed., 2007; http://www.us.oup.com/us/pdf/9780195176339/table_2.pdf
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