

SI Units

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	0-50 (0-19y) 0-50 (20y+) 0-70	U/L	0.0167	0-0.84 0-0.84 0-1.17	ukat/L
Albumin	(1-54y) 3.9-5.1 (55y+) 3.3-4.9	g/dL	10	39-51 33-49	g/L
Alkaline Phosphatase	40-150	U/L	0.0167	0.67-2.51	ukat/L
Ammonia				10-35	umol/L
AST female male	0-45 0-55	U/L	0.0167	0-0.75 0-0.92	ukat/L
Bilirubin Delta Direct Total	0.0-0.4 0.0-0.3 0.2-1.3	mg/dL	17.10	0-6.84 0-5.13 3.42-22.23	umol/L
Calcium	8.5-10.4	mg/dL	0.25	2.13-2.6	mmol/L
Chloride	94-109	mEq/L	1.00	94-109	mmol/L
Cholesterol (desirable)	<200	mg/dL	0.0259	<5.18	mmol/L
CO ₂ , Total	20-32	mEq/L	1.00	20-32	mmol/L
Hemogram (CBC): Hematocrit male female	40.0-53.0 35.0-47.0	%	0.01	0.40-0.53 0.35-0.47	Proportion of 1
Hemoglobin male female	13.3-17.7 11.7-15.7	g/dL	10.0	133-177 117-157	g/L
MCH	26.5-33.0	pg			
MCHC	31.5-36.5	g/dL			
MCV	78-100	fL			
RDW	10.0-15.0	%			
Platelet Count	150-450 x 10 ³ /L		1.00	150-450 x 10 ⁹ /L	
Red Cell Count male female	4.4-5.9 x 10 ⁶ /uL 3.8-5.2 x 10 ⁶ /uL		1.00	4.4-5.9 x 10 ⁶ /uL 3.8-5.2 x 10 ⁶ /uL	
White Cell Count	4000-11000/uL		0.001	4.0-11.0 x 10 ⁹ /L	
Cortisol 8 AM 4 PM	4-22 3-17	ug/dL	27.588	110.35-606.94 82.76-468.99	nmol/L
Creatinine male female	0.66-1.25 0.52-1.04	mg/dL	76.25	50.33-95.31 39.65-79.30	umol/L
Digoxin, Therapeutic	0.5-2.0	ng/mL	1.28	0.6-2.6	nmol/L
Ferritin male female (15-44y) (45y+)	20-300 10-120 10-300	ng/mL	2.247	44.94-674.10 22.47-269.64 22.47-674.10	pmol/L
Folic Acid serum RBC	>5.4 280-791	ng/mL	2.266	>12.24 634-1792	nmol/L
FSH male female, follicular phase mid-cycle peak luteal phase postmenopausal	1.4-18.1 2.5-10.2 3.4-33.4 1.5-9.1 23.0-116.3	IU/L	1.00	1.4-18.1 2.5-10.2 3.4-33.4 1.5-9.1 23.0-116.3	IU/L
Gases, Arterial pH pCO ₂ pO ₂	7.35-7.45 35-45 80-105	pH units mm Hg mm Hg	1.00 0.133 0.133	7.35-7.45 4.7-5.9 11-14	pH units kPa kPa
Glucose (fasting) (casual)	40-99 40-139	mg/dL	0.0555	2.22-5.49 2.22-7.71	mmol/L

TEST INFORMATION

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Iron	35-180	ug/dL	0.179	6.26-32.22	umol/L
LD	325-750	U/L	0.0167	5.43-12.52	ukat/L
Magnesium	1.6-2.3	mEq/L	0.50	0.8-1.15	mmol/L
Osmolality (<59y) (60y+)	275-295 280-301	mOsm/kg	1.00	275-295 280-301	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	2.5-4.5	mg/dL	0.323	0.81-1.45	mmol/L
Potassium (non-serum)	3.4-5.3	mEq/L	1.00	3.4-5.3	mmol/L
Protein, Total	6.8-8.8	g/dL	10.0	68-88	g/L
Sodium	133-144	mEq/L	1.00	133-144	mmol/L
Theophylline, therapeutic	10-20	ug/mL	5.55	56-111	umol/L
Thyrotropin (TSH)	0.4-5.0	mIU/L	1.00	0.4-5.0	mIU/L
Thyroxine, free (FT4)	0.70-1.85	ng/dL	12.87	9.0-23.8	pmol/L
Thyroxine, total (T4)	5.0-11.0	ug/dL	12.87	64-141	nmol/L
Transferrin	210-360	mg/dL	0.0123	2.58-4.43	umol/L
Tri-iodothyronine (T3)	60-181	ng/dL	0.0154	0.92-2.76	nmol/L
Triglycerides	<150	mg/dL	0.0113	<1.695	mmol/L
Urea Nitrogen (<50y) (50y+)	5-24 7-30	mg/dL	0.357	1.78-8.57 2.50-10.71	mmol/L
Uric Acid male female (17-34y) (35-44y) (45y+)	3.5-8.5 2.5-6.2 2.5-7.0 2.5-7.5	mg/dL	59.485	208-506 149-369 149-416 149-446	umol/L
Vitamin B12	247-911	pg/mL	0.738	182-672	pmol/L

Last Reviewed/Revised: G Gregorich, J Forsy 2/28/12