LABORATORY VALUES (see inside back cover for continuation)
* Included in the Biochemical Profile (SMA-12)

	REFERENCE RANGE	SI REFERENCE INTERVALS
BLOOD, PLASMA, SERUM		
* Alanine aminotransferase (ALT), serum	8-20 U/L	8-20 U/L
Amylase, serum	25-125 U/L	25-125 U/L
* Aspartate aminotransferase (AST), serum	8-20 U/L	8-20 U/L
Bilirubin, serum (adult) Total // Direct	0.1-1.0 mg/dL // 0.0-0.3 mg/dL	2-17 μmol/L // 0-5 μmol/L
* Calcium, serum (Ca^{2+})	8.4-10.2 mg/dL	2.1-2.8 mmol/L
* Cholesterol, serum	Rec:<200 mg/dL	<5.2 mmol/L
Cortisol, serum	0800 h: 5-23 μg/dL // 1600 h: 3-15 μg/dL	138-635 nmol/L // 82-413 nmol/L
	2000 h: ≤ 50% of 0800 h	Fraction of 0800 h: ≤ 0.50
Creatine kinase, serum	Male: 25-90 U/L	25-90 U/L
	Female: 10-70 U/L	10-70 U/L
* Creatinine, serum	0.6-1.2 mg/dL	53-106 μmol/L
Electrolytes, serum		
Sodium (Na^+)	136-145 mEq/L	136-145 mmol/L
* Potassium (K^+)	3.5-5.0 mEq/L	3.5-5.0 mmol/L
Chloride (Cl^-)	95-105 mEq/L	95-105 mmol/L
Bicarbonate (HCO_3^-)	22-28 mEq/L	22-28 mmol/L
Magnesium (Mg^{2+})	1.5-2.0 mEq/L	0.75-1.0 mmol/L
Estriol, total, serum (in pregnancy)		
24-28 wks // 32-36 wks	30-170 ng/mL // 60-280 ng/mL	104-590 nmol/L // 208-970 nmol/L
28-32 wks // 36-40 wks	40-220 ng/mL // 80-350 ng/mL	140-760 nmol/L // 280-1210 nmol/L
Ferritin, serum	Male: 15-200 ng/mL	15-200 μg/L
	Female: 12-150 ng/mL	12-150 μg/L
Follicle-stimulating hormone, serum/plasma	Male: 4-25 mIU/mL	4-25 U/L
	Female: premenopause 4-30 mIU/mL	4-30 U/L
	midcycle peak 10-90 mIU/mL	10-90 U/L
	postmenopause 40-250 mIU/mL	40-250 U/L
Gases, arterial blood (room air)		
pH	7.35-7.45	$[H^+]$ 36-44 nmol/L
P_{CO_2}	33-45 mm Hg	4.4-5.9 kPa
P_{O_2}	75-105 mm Hg	10.0-14.0 kPa
* Glucose, serum	Fasting: 70-110 mg/dL	3.8-6.1 mmol/L
	2-h postprandial: < 120 mg/dL	< 6.6 mmol/L
Growth hormone - arginine stimulation	Fasting: < 5 ng/mL	< 5 μg/L
	provocative stimuli: > 7 ng/mL	> 7 μg/L
Immunoglobulins, serum		
IgA	76-390 mg/dL	0.76-3.90 g/L
IgE	0-380 IU/mL	0-380 kIU/L
IgG	650-1500 mg/dL	6.5-15 g/L
IgM	40-345 mg/dL	0.4-3.45 g/L
Iron	50-170 μg/dL	9-30 μmol/L
Lactate dehydrogenase, serum	45-90 U/L	45-90 U/L
Luteinizing hormone, serum/plasma	Male: 6-23 mIU/mL	6-23 U/L
	Female: follicular phase 5-30 mIU/mL	5-30 U/L
	midcycle 75-150 mIU/mL	75-150 U/L
	postmenopause 30-200 mIU/mL	30-200 U/L
Osmolality, serum	275-295 mOsmol/kg H_2O	275-295 mOsmol/kg H_2O
Parathyroid hormone, serum, N-terminal	230-630 pg/mL	230-630 ng/L
* Phosphatase (alkaline), serum (p-NPP at 30°C)	20-70 U/L	20-70 U/L
* Phosphorus (inorganic), serum	3.0-4.5 mg/dL	1.0-1.5 mmol/L
Prolactin, serum (hPRL)	< 20 ng/mL	< 20 μg/L
* Proteins, serum		
Total (recumbent)	6.0-7.8 g/dL	60-78 g/L
Albumin	3.5-5.5 g/dL	35-55 g/L
Globulin	2.3-3.5 g/dL	23-35 g/L
Thyroid-stimulating hormone, serum or plasma	0.5-5.0 μU/mL	0.5-5.0 mU/L
Thyroidal iodine (^{123}I) uptake	8%-30% of administered dose/24 h	0.08-0.30/24 h
Thyroxine (T_4), serum	5-12 μg/dL	64-155 nmol/L
Triglycerides, serum	35-160 mg/dL	0.4-1.81 mmol/L
Triiodothyronine (T_3), serum (RIA)	115-190 ng/dL	1.8-2.9 nmol/L
Triiodothyronine (T_3) resin uptake	25%-35%	0.25-0.35
* Urea nitrogen, serum	7-18 mg/dL	1.2-3.0 mmol/L
* Uric acid, serum	3.0-8.2 mg/dL	0.18-0.48 mmol/L

	REFERENCE RANGE	SI REFERENCE INTERVALS
BODY MASS INDEX (BMI)		
Body mass index	Adult: 19-25 kg/m^2	
CEREBROSPINAL FLUID		
Cell count	0-5/mm^3	0-5 x 10^6/L
Chloride	118-132 mEq/L	118-132 mmol/L
Gamma globulin	3%-12% total proteins	0.03-0.12
Glucose	40-70 mg/dL	2.2-3.9 mmol/L
Pressure	70-180 mm H_2O	70-180 mm H_2O
Proteins, total	<40 mg/dL	<0.40 g/L
HEMATOLOGIC		
Bleeding time (template)	2-7 minutes	2-7 minutes
Erythrocyte count	Male: 4.3-5.9 million/mm^3	4.3-5.9 x 10^{12}/L
	Female: 3.5-5.5 million/mm^3	3.5-5.5 x 10^{12}/L
Erythrocyte sedimentation rate (Westergren)	Male: 0-15 mm/h	0-15 mm/h
	Female: 0-20 mm/h	0-20 mm/h
Hematocrit	Male: 41%-53%	0.41-0.53
	Female: 36%-46%	0.36-0.46
Hemoglobin A_{1c}	$\leq$ 6%	$\leq$ 0.06
Hemoglobin, blood	Male: 13.5-17.5 g/dL	2.09-2.71 mmol/L
	Female: 12.0-16.0 g/dL	1.86-2.48 mmol/L
Hemoglobin, plasma	1-4 mg/dL	0.16-0.62 mmol/L
Leukocyte count and differential		
Leukocyte count	4500-11,000/mm^3	4.5-11.0 x 10^9/L
Segmented neutrophils	54%-62%	0.54-0.62
Bands	3%-5%	0.03-0.05
Eosinophils	1%-3%	0.01-0.03
Basophils	0%-0.75%	0-0.0075
Lymphocytes	25%-33%	0.25-0.33
Monocytes	3%-7%	0.03-0.07
Mean corpuscular hemoglobin	25.4-34.6 pg/cell	0.39-0.54 fmol/cell
Mean corpuscular hemoglobin concentration	31%-36% Hb/cell	4.81-5.58 mmol Hb/L
Mean corpuscular volume	80-100 μm^3	80-100 fL
Partial thromboplastin time (activated)	25-40 seconds	25-40 seconds
Platelet count	150,000-400,000/mm^3	150-400 x 10^9/L
Prothrombin time	11-15 seconds	11-15 seconds
Reticulocyte count	0.5%-1.5%	0.005-0.015
Thrombin time	<2 seconds deviation from control	<2 seconds deviation from control
Volume		
Plasma	Male: 25-43 mL/kg	0.025-0.043 L/kg
	Female: 28-45 mL/kg	0.028-0.045 L/kg
Red cell	Male: 20-36 mL/kg	0.020-0.036 L/kg
	Female: 19-31 mL/kg	0.019-0.031 L/kg
SWEAT		
Chloride	0-35 mmol/L	0-35 mmol/L
URINE		
Calcium	100-300 mg/24 h	2.5-7.5 mmol/24 h
Chloride	Varies with intake	Varies with intake
Creatinine clearance	Male: 97-137 mL/min	
	Female: 88-128 mL/min	
Estriol, total (in pregnancy)		
30 wks	6-18 mg/24 h	21-62 µmol/24 h
35 wks	9-28 mg/24 h	31-97 µmol/24 h
40 wks	13-42 mg/24 h	45-146 µmol/24 h
17-Hydroxycorticosteroids	Male: 3.0-10.0 mg/24 h	8.2-27.6 µmol/24 h
	Female: 2.0-8.0 mg/24 h	5.5-22.0 µmol/24 h
17-Ketosteroids, total	Male: 8-20 mg/24 h	28-70 µmol/24 h
	Female: 6-15 mg/24 h	21-52 µmol/24 h
Osmolality	50-1400 mOsmol/kg H_2O	
Oxalate	8-40 µg/mL	90-445 µmol/L
Potassium	Varies with diet	Varies with diet
Proteins, total	<150 mg/24 h	<0.15 g/24 h
Sodium	Varies with diet	Varies with diet
Uric acid	Varies with diet	Varies with diet