

Blood Gas/Critical Care

Test	Low		High	
	N*	Range (min - max)	N*	Range (min - max)
pH	31	7.00 - 7.26	31	7.50 - 7.99
pCO ₂ (mmHg)	19	20 - 31	19	50 - 70
pO ₂ (mmHg)	17	20 - 61	3	90 - 95
Bicarbonate (mmol/L)	18	10 - 16	14	35 - 40
Calcium, total (mmol/L)	20	1.40 - 2.00	20	2.99 - 3.50
Calcium, ionized (mmol/L)	10	0.60 - 1.00	9	1.50 - 1.70
Glucose (mmol/L)	32	2.2 - 3.0	39	16.7 - 30.0
Lactate (mmol/L)	<3	N/A	14	2.4 - 5.6
Magnesium (mmol/L)	16	0.30 - 0.50	14	1.20 - 6.05
Osmolality (mOsm/kg)	7	250 - 251	8	320 - 349
Phosphate (mmol/L)	9	0.30 - 0.70	4	2.99 - 3.49
Potassium (mmol/L)	30	2.5 - 3.1	30	5.5 - 6.6
Sodium (mmol/L)	16	120 - 125	16	150 - 160

Hematology/Coagulation

Test	Low		High	
	N*	Range (min - max)	N*	Range (min - max)
aPTT (s)	<3	N/A	21	75 - 150
Fibrinogen (g/L)	12	0.3 - 1.1	<3	N/A
Hemoglobin (g/L)	29	50 - 80	23	200 - 200
INR	<3	N/A	17	4 - 6
Leukocytes (x10 ⁹ /L)	18	0.5 - 2.5	20	20 - 100
Neutrophils (x10 ⁹ /L)	12	0.5 - 1.1	<3	N/A
Platelets (x10 ⁹ /L)	21	20 - 101	14	1000 - 1000

Drugs/Toxicology

Test	Low		High	
	N*	Range (min - max)	N*	Range (min - max)
Acetaminophen (µmol/L)	<3	N/A	21	199 - 800
Amikacin (mg/L)	<3	N/A	<3	N/A
Carbamazepine (µmol/L)	<3	N/A	14	50 - 85
Digoxin (nmol/L)	<3	N/A	16	2.6 - 4.0
Ethanol (mmol/L)	<3	N/A	8	22 - 50
Gentamicin (pre-dose) (mg/L)	<3	N/A	7	1.8 - 5.0
Gentamicin (post-dose) (mg/L)	<3	N/A	9	8 - 20
Lithium (mmol/L)	<3	N/A	15	1.0 - 2.0
Phenobarbital (µmol/L)	<3	N/A	7	170 - 225
Phenytoin (µmol/L)	<3	N/A	16	55 - 120
Salicylate (mmol/L)	<3	N/A	20	2.0 - 4.0
Theophylline (µmol/L)	<3	N/A	8	109 - 140
Tobramycin (pre-dose) (mg/L)	<3	N/A	4	1.8 - 2.0
Tobramycin (post-dose or random) (mg/L)	<3	N/A	5	8 - 19
Valproate (µmol/L)	<3	N/A	15	693 - 1400
Vancomycin (pre-dose) (mg/L)	<3	N/A	10	20 - 80
Vancomycin (post-dose) (mg/L)	<3	N/A	13	50 - 80

General Chemistry

Test	Low		High	
	N*	Range (min - max)	N*	Range (min - max)
Ammonia (µmol/L)	<3	N/A	7	98 - 300
Bilirubin, total (µmol/L)	<3	N/A	39	140 - 350
Creatinine (µmol/L)	<3	N/A	13	300 - 600
Iron (µmol/L)	<3	N/A	3	50 - 55
Troponin-I (µg/L)	<3	N/A	3	0.40 - 0.50
Urate (µmol/L)	<3	N/A	6	700 - 1200

Legend

Considered harmonizable (see page 2)

Not considered harmonizable

* If any institution reported more than one critical low/high value for a test in question, each one was counted as one critical value. For example, an institution reporting separate potassium critical high values for pediatrics and adults would have N=2.