Critical Values

Effective October 27, 2026

HNL Lab Medicine

Analyte	Low Limit	High Limit
Blood Gases		
Calcium, Ionized, Whole Blood	<0.75 mmol/L	>1.63 mmol/L
Carboxyhemoglobin	–	>20.0 %
pO2, Arterial	≤40 mmHg	–
pCO2, Arterial	<20 mmHg	–
pH, Arterial	<7.20	>7.60
pH, Cord Blood, Arterial	<7.00	–
TCO2	<10 mmol/L	>40 mmol/L
Chemistry		
Ammonia	–	>100 µ mol/L
Bilirubin, Total	–	>15 mg/dL
Calcium	<6.0 mg/dL	>13.0 mg/dL
Glucose	<50 mg/dL	>500 mg/dL
Lactate	–	≥4.0 mmol/L
Magnesium	<1.0 mg/dL	>6.1 mg/dL
Phosphorus	≤1.0 mg/dL	–
Potassium	<2.5 mmol/L	>6.0 mmol/L
Sodium	<120 mmol/L	≥160 mmol/L
Troponin (hs-TnI)	–	Males >200 ng/L Females >120 ng/L
Troponin I	–	>0.78 ng/mL
Urinalysis		
Sperm	Sperm if present in urine of females <18 years and ALL female nursing home residents	
Hematology		
Differential (WBC)	• Presence of ≥3.0 immature (blast) cells (1st time only) Hematopathologist review to follow • Microorganisms (Intracellular or Extracellular) present on peripheral blood smear	
Hemoglobin	Age 0-3 days: <12.0 g/dL Age 4-60 days: <9.0 g/dL Age >60 days: <7.0 g/dL	Age 0-3 days: >22.0 g/dL Age 4-60 days: >20.0 g/dL Age >60 days: >21.0 g/dL
Platelets	Age 0-7 days: <25 thousand/uL Age >7 days: <20 thousand/uL	>1,000 thousand/µL (10^9/L)
WBC	–	≥50 thousand/µL (10^9/L)
Absolute Neutrophil Count (ANC)	<0.5 thousand/µL (10^9/L)	–
Coagulation		
Fibrinogen	<60 mg/dL	–
Heparin Level (Unfractionated)	–	>0.7 units/mL
INR	–	> 4.9

PTT	–	≥100.0 seconds* * range varies with reagent lot
Toxicology		
Acetaminophen	–	>150 µg/mL
Amikacin, Trough	–	>10 µg/mL
Carbamazepine	–	Free: >4.0 µg/mL Total: >20µg/mL
Digoxin	–	>2.5 ng/mL
Gentamicin	–	Peak: >12.0 µg/mL Trough: >2.0 µg/mL
Lithium	–	≥1.5 mmol/L
Phenobarbital	–	>60.0 µg/mL
Phenytoin	–	Free: >3.0 µg/mL Total: ≥40.0 mg/L
Salicylate	–	>40.0 mg/dL
Theophylline	–	>25.0 µg/mL
Tobramycin	–	Peak: >12.0 µg/mL Trough: >2.0 µg/mL
Valproic Acid	–	Free: – Total: >125 µg/mL
Vancomycin	–	Peak: >80.0 µg/mL Trough: >40 µg/mL Random: –

Test	Call
Microbiology	
AFB, Mycobacteria, TB Culture	Positive smears, cultures, and TB PCR
Blood Culture	Positive Gram stains and/or Positive Nucleic Acid Amplification (NAA)
Cerebral Spinal Fluid	Any positive result (Gram stain, Culture, PCR, Antigen)
Eye Culture (Corneal Scrapings and Vitreous Fluid)	Any positive culture
Mycology Culture	Blastomyces dermatitidis, Histoplasma capsulatum, Paracoccidioides brasiliensis, Coccidioides immitis, Penicillium marneffei and Sporothrix schenckii
Susceptibilities	Carbapenemase producing Enterobacteriaceae (CPOs), Extended Spectrum Beta-Lacamases (ESBLs) from sterile sites (pleural fluid, pericardial fluid, bone culture, blood culture, bone marrow culture)
Synovial Fluid Culture	Positive Gram stains and positive cultures
Wound/ Fluid Cultures	Beta Streptococci Group A isolates in sterile sites only
Any Culture	Recovery of C. auris or any potential biothreat organism
Transfusion Medicine	
Direct Antiglobulin Test (DAT)	All positive results for neonates only

HNL Lab Medicine 2026. All Rights Reserved.