

Laboratory Critical Values

Test Description	Age Specific	Lower Limit	Upper Limit	Units
AFB Smear and Culture			Positive	
Acetaminophen			>120	mcg/ml
Alcohol (Ethanol)			>300	mg/dl
Arterial Blood Gases	pH	<7.2	>7.6	
	pO ₂	<40 if HHb <15		mmHg
	pCO ₂	<25 if pH <7.38 or >7.46	>60 if pH <7.38 or >7.46	mmHg
Bilirubin	0 - 1 day		>10.0	mg/dl
	2 - 3 days		>15.0	mg/dl
	4 - 30 days		>18.0	mg/dl
Blood Cultures			Positive	
Calcium	0-18 years	<8.0	>12.0	mg/dl
	> 18 years	<6.5	>12.0	mg/dl
Digoxin			>2.0	ng/ml
Gentamicin Peak & Random			>10.0	mcg/mL
Gentamicin Trough	0 – 30 days		>1.0	mcg/mL
	> 30 days		>2.0	mcg/mL
Glucose	0 - 30 days	<30	>200	mg/dl
	> 30 days	<50	>500	mg/dl
Gram Stain (Sterile body fluids)			Positive	
Gram stain or culture of a transfusion reaction workup			Positive	
Hematocrit	0 – 30 days	<30	>65	%
	>30 days	<20	>59	%
Hemoglobin	0 – 30 days	<10.0	>22.0	g/dl
	>30 days	<7.0	>19.0	g/dl
Heparin PF4			Positive	
INR			>5	
Lactic Acid			≥ 4.0	mmol/L
Lithium			>2.0	meq/L
Magnesium – FBCMG only		<1.0	>8.0	mg/dl
Magnesium		<1.0	>4.7	mg/dl
Osmolality serum		<250	>350	mOsm/kg
Peripheral Blood Smear		Protozoa, filaria, hemoflagellates, intracellular bacteria, or intracellular fungi		
Phenobarbital			>50.0	mcg/mL
Phenytoin (Dilantin)			>30.0	mcg/mL

Test Description	Age Specific	Lower Limit	Upper Limit	Units
Phosphorus		<1.0		mg/dl
Platelets	0 - 30 days	<50	>1,000,000	10 ⁹ /L
	>30 days	<20	>1,000,000	10 ⁹ /L
Post transfusion DAT or evidence of hemolysis of a transfusion reaction workup.	Positive		Post transfusion DAT or evidence of hemolysis of a transfusion reaction workup.	Positive
Potassium	0 – 4 days	<2.5	>6.5	mmol/L
	5 days-18 years	<3.0	>6.5	mmol/L
	>18 years	<3.0	>6.0	mmol/L
PTT			≥240	sec
Serotonin Release Assay		Positive or Negative result must be called		
Sodium	0 - 18 years	<125	>150	mmol/L
	>18 years	<120	>155	mmol/L
Tegretol (Carbamazepine)			>15.0	mcg/mL
Theophylline			>20.0	mcg/mL
Tobramycin Peak & Random			>10.0	mcg/mL
Tobramycin Trough			>2.0	mcg/mL
Troponin I			≥1.5	ng/mL
Valproic Acid			>150	mcg/mL
Viral cultures or antigens, or PCR for CSF, ME Panel CSF-PCR			Positive	
WBC	0 - 30 days	<5.0	>35.0	10 ⁹ /L (mm ³)
	>30 days - 18 years	<3.0	>30.0	10 ⁹ /L (mm ³)
	>18 years	≤1.0	>100	10 ⁹ /L (mm ³)

Laboratory Alert Values

Alert values obtained after normal business hours are called the next business day

Test Description	Age Specific	Lower Limit	Upper Limit	Units
Clostridium Difficile			Positive	
FLU (ED patients & inpatients)			Positive	
GI Panel			Positive	
Glucose (Inpatients)	>15 years old	50	69	mg/dl
Ionized Calcium		<0.8	>1.54	
Nasal MRSA			Positive	
Pertussis			Positive	
Positive Cultures: Salmonella, Shigella, Campylobacter, and E. Coli 0157:H7, Neisseria Meningitidis, Haemophilus Influenzae invasive Disease and Vancomycin Resistant Staphylococcus Aureus			Positive	
Resistant Organisms Requiring Patient Isolation: Vancomycin Resistant Enterococcus (VRE), Extended Spectrum Beta lactamase producers (ESBL), Multi-drug Resistant Actinetobacter, Extensively Drug Resistant Enterobacteriaceae, Carbapenem Resistant Enterobacteriaceae (CRE, and Carbapenemase Producing Enterobacteriaceae (CPE)			Positive	
Respiratory Panel (ED patients)			Positive	
RSV (ED patients)			Positive	
Vancomycin Peak & Random			>60.0	mcg/ml
Vancomycin Trough	0 – 30 days		>10.0	mcg/ml
	>30 days		>20.0	mcg/ml