

Critical Values

The values listed below are for tests performed at Meriter Laboratories (ML). It is ML's policy to telephone these results to a member of the patient's care team. For testing performed outside of ML, Meriter will call a member of the patient's care team with any calls/results received from the performing reference laboratory.

Within a ML report, numerical value outside of the reference range are indicated by an "L" (low) or a "H" (high) to the right of the result number. If a value is considered critical, the letter "C" will precede the "L" or "H". An abnormal textual result is indicated by an "AB" (abnormal) to the right of the result.

Analyte	Critically Low Value	Critically High Value
Acetaminophen (Tylenol®)		≥50 mcg/mL
Acetone		>5 mg/dL
Activated Partial Thromboplastin Time (APTT), Blood or Plasma		>200.0 seconds
Alcohol (Medical/Non-Legal), Plasma		≥300 mg/dL
Amikacin, Peak, Plasma		>35.0 mcg/mL
≥18 years		
Amikacin, Trough, Plasma		>5.0 mcg/mL
≥18 years		
Amitriptyline and Nortriptyline		≥300 ng/mL
Amylase, Plasma		≥400 U/L
Bilirubin, Total, Plasma		
≤2 Days		≥12.0 mg/dL
3 Days - ≤7 days		≥15.0 mg/dL
>7 days		≥10.0 mg/dL
Bilirubin, Total, Whole Blood		
≤2 Days		≥12.0 mg/dL
3 Days - ≤7 days		≥15.0 mg/dL
>7 days		≥10.0 mg/dL
Blood Urea Nitrogen (BUN), Plasma		≥100 mg/dL
Calcium, Ionized, Plasma	≤0.85 mmol/L	≥1.40 mmol/L
Calcium, Plasma	≤6.0 mg/dL	≥13.0 mg/dL
Calcium, Serum	≤6.0 mg/dL	≥13.0 mg/dL

Analyte	Critically Low Value	Critically High Value
Carbamazepine (Tegretol®), Plasma		≥15 mcg/mL
Carbon Monoxide (CO), Carboxyhemoglobin, Venous		≥20.0% of CO Hb2
Creatine Kinase (CK), Total, Plasma		≥ 400 U/L
Creatinine, Plasma		≥ 10.0 mg/dL
Creatinine, Whole Blood		≥ 10.0 mg/dL
Cord Blood Gases, pH	≤ 7.15	
Cord Blood Gases, Base Deficit	≥ 10.0	
Digoxin, Plasma		≥ 2.5 ng/mL
Ethylene Glycol		> 2 mg/dL
Gentamicin, Peak, Plasma		≥ 12.0 mcg/mL
Gentamicin, Trough, Plasma		≥ 3.0 mcg/mL
Glucose, Plasma		
≤3 months	≤ 35 mg/dL	≥ 325 mg/dL
>3 months - ≤ 1 year	≤ 45 mg/dL	≥ 450 mg/dL
>1 year	≤ 69 mg/dL	≥ 450 mg/dL
Glucose, Whole Blood		
≤ 3 months	≤ 35 mg/dL	≥ 325 mg/dL
> 3 months - ≤ 1 year	≤ 45 mg/dL	≥ 450 mg/dL
> 1 year	≤ 69 mg/dL	≥ 450 mg/dL
Glucose, Meter Correlation (GLMTR)	Difference of ≥15%	
Hematocrit, Blood	≤ 21.0%	
Hemoglobin, Blood	≤ 7.0 g/dL	≥20 g/dL
≤ 30 days	≤ 7.0 g/dL	≥24.0 g/dL
Heparin Induced Platelet Antibody, Plasma		All positive or borderline results
Imipramine and Desipramine		≥ 300 ng/mL
INR (Prothrombin Time [PT]), Blood or Plasma		≥ 4.5
Isopropanol		> 5 mg/dL
Lactate, Arterial		> 4.0 mmol/L
Lactate, Venous		> 4.0 mmol/L
Lithium, Serum		≥ 2.0 mmol/L
Magnesium, Plasma	≤ 1.0 mg/dL	≥ 8.0 mg/dL

Analyte	Critically Low Value	Critically High Value
Magnesium, OB	≤ 1.0 mg/dL	≥ 9.0 mg/dL
Methanol		> 10 mg/dL
Nortriptyline		≥300 ng/mL
Osmolality, Plasma or Serum	≤240 mOsm/kg	≥340 mOsm/kg
pH, Venous	<7.25	>7.65
Phenobarbital, Plasma		≥50 mcg/mL
Phenytoin (Dilantin®), Total, Plasma		≥30 mcg/mL
Phenytoin, Unbound, Serum		>3.0 mcg/mL
Phosphorus, Plasma		
≤10 days	≤1.0 mg/dL	≥12.0 mg/dL
>10 days	≤1.0 mg/dL	≥8.0 mg/dL
Platelet Count, Blood	≤25 thou/μL	≥1,000 thou/μL
Potassium, Plasma	≤2.8 mmol/L	≥6.0 mmol/L
Potassium, Serum	≤2.8 mmol/L	≥6.0 mmol/L
Potassium, Whole Blood	≤2.8 mmol/L	≥6.0 mmol/L
Salicylate, Plasma		≥50 mg/dL
Sodium, Plasma	≤120 mmol/L	≥155 mmol/L
Tacrolimus, Whole Blood		>15 ng/mL
Theophylline, Plasma		≥20 mcg/mL
Thiopental, Serum		>5.0 mg/dL
Thiopental Pentobarbital		1.0-2.0 mg/dL
Troponin T Gen 5 (High Sensitivity)		>100 ng/L
Tobramycin, Peak, Plasma		≥12.0 mcg/mL
Tobramycin, Trough, Plasma		≥3.0 mcg/mL
Valproate, Unbound, Serum		>150.0 mcg/mL
Valproate (Valproic Acid), Plasma		≥150.0 mcg/mL
Vancomycin, Mid-Point, Plasma		≥50.0 mcg/mL
Vancomycin, Peak, Plasma		≥60.0 mcg/mL
Vancomycin, Random, Plasma		≥50.0 mcg/mL
Vancomycin, Trough, Plasma		≥20.0 mcg/mL

Analyte	Critically Low Value	Critically High Value
WBC (White Blood Count), Blood	<1.0 thou/ μ L	>50.0 thou/ μ L

Microbiology

For certain serious bacterial infections, speed in initiating proper antibiotic therapy can significantly influence the course of the disease. As soon as the laboratory becomes aware of a serious or potentially serious infection fitting the circumstances below, the physician or source facility will be telephoned.

Critical Result	
Blood Culture	All positive cultures
Cerebrospinal Fluid	All bacteria or fungi detected by Gram Stain, culture, first positive antigen, or molecular testing.
Sterile body fluids/sites (eg, joint, pericardial, or tissue biopsies)	All bacteria or fungi detected by Gram Stain, culture, first positive antigen, or molecular testing.

Other important pathogens will be reported by telephone when detected, unless patient is already flagged for appropriate isolation. Even though they may not cause life-threatening infections, they may require Isolation Precautions or change in treatment and are to be reported to the physician.

**For Lafayette Hospital, after hours calls can be left on the secure voicemail.

These include:

Feces – Except ED discharged	Positive <i>Clostridium difficile</i> Positive <i>Escherichia coli</i> O157 or positive Shiga toxin EIA tests <i>Salmonella</i> <i>Shigella</i> <i>Campylobacter</i> Positive <i>Norovirus</i>
Multi-resistant organisms isolated – Except ED discharged	Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) Vancomycin resistant <i>Enterococcus</i> (VRE) MDR Gram negative rods Carbapenamase resistant gram-negative rods
Nasopharyngeal- Inpatients or Resident Facilities	Positive pertussis tests, respiratory syncytial virus (RSV), or influenza.

Legionella

All positive results regardless of source