

## Clinical Laboratory Critical Values

(Effective March 22, 2023)

Blood Bank		
Hemolytic Transfusion Reactions		
Acute Hemolysis detected during a Transfusion Reaction Workup		
Positive culture of a unit recently transfused (within 1 week)		
Incompatible crossmatch completed after emergency issue of uncross-matched RBC		
Unexpected antibody in a patient in the OR		
Issue or transfusion of: <ul style="list-style-type: none"> <li>the wrong unit</li> <li>an incompatible unit</li> <li>incorrectly labeled (wrong patient) unit</li> </ul>		
Positive Direct Antibody Testing on a Neonatal Venous or Cord Blood specimen		
Unacceptable sample because of wrong-blood-in-tube identified by comparison with historical type and after type confirmation.		
Test	Low	High
Clinical Chemistry		
Adult		
Arterial or capillary blood pCO <sub>2</sub>		70 mm Hg
Arterial or capillary blood pH	7.15	7.6
Arterial or capillary blood pO <sub>2</sub>	40 mmHg	
Bicarbonate (Total Carbon Dioxide)	10mmol/L	40mmol/L
Calcium	6.0 mg/dL	13.0 mg/dL
Ionized Calcium	3.0mg/dL	6.5 mg/dL
Glucose, > 1 year	40 mg/dL	500 mg/dL
Phosphorus	1.0 mg/dL	10.0 mg/dL
Potassium	2.5 mEq/L	6.2mEq/L
Sodium	120 mEq/L	160 mEq/L
Magnesium	<1 mg/dL	>5 mg/dL

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Osmolality	250 mosm/Kg	320 mosm/Kg
Glucose (tolerance)	<60 mg/dL	>500 mg/dL
CSF Glucose	<20 mg/dL	
CSF Protein		>300mg/dL
FreeT4		>3.5 ng/dL
Plasma Troponin		≥0.04 ng/mL, first positive within 48 hours
<b>Pediatric</b>		
(Pediatric Crisis Values are the same as adults, except for the following)		
Ammonia		> 150 mcmol/L
Total Bilirubin: Neonates only (Less than or equal to 30 days)		>18 mg/dL
Glucose, newborn < 30 days	30 mg/dL	200 mg/dL
Glucose, newborn 30 days – 1 year	30 mg/dL	300 mg/dL
Potassium, newborn < 10 days	2.0 mEq/L	7.0 mEq/L
Sodium, newborn< 30 days	125 mEq/L	160 mEq/L
<b>Coagulation</b>		
PT Prothrombin Time/INR		INR > 6.0
PTT - Partial Thromboplastin Time (aPTT, Activated Partial Thromboplastin Time)		≥ 200 sec.
Fibrinogen	≤60 mg/dL	
Unfractionated heparin		> 1 U/ml
Low molecular weight heparin		> 1.7 U/ml
<b>Hematology</b>		
PCV (Hematocrit, packed cell volume)	< 18 %	> 69 and <2 mo of age, >54 and > 2mo of age and no previous within 7 days
HgB (Hemoglobin)	< 6 gm/dL	
WBC (White Blood Cell)	< 1000/μL and no previous within 30 days	> 100,000 /μL and no previous within 30 days
PLT (Platelets)	< 30,000/μL	

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	and no prev. Within 7 days. <5000/ul always called regardless of previous	
Peripheral smear differential	Blasts - Adults > 5%, Blasts - Children > 10%	Peripheral smear differential
Peripheral smear morphology	Red cell fragments with decreased platelets on smear. (<50,000 or a 50% change)	Peripheral smear morphology
CSF (Cerebrospinal Fluid)	Presence of Cryptococcal - like yeast or intracellular bacteria	CSF (Cerebrospinal Fluid)