

**CLINICAL LABORATORY CRITICAL VALUES, AUGUST 31, 2015  
VANDERBILT DIAGNOSTIC LABORATORIES**

**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 uncrossmatched RBC

Unexpected antibody in a patient in the OR

Issue or transfusion of:

- the wrong unit
- an incompatible unit
- incorrectly labeled (wrong patient) unit

Positive Direct Antibody Testing on a Cord Blood specimen

Unacceptable sample because of wrong-blood-in-tube identified by comparison with historical type, and after type confirmation.

TEST	LOW	HIGH
<b>CLINICAL CHEMISTRY</b>		
<b>ADULT</b>		
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, > 1year	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
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>THERAPEUTIC DRUG MONITORING/TOXICOLOGY</b>		
Digoxin		4.0 ng/mL
Lithium		2.0 mEq/L
Ethanol (Ethanol, ETH, Blood alcohol)		400 mg/dL
Acetaminophen (ACE, Tylenol)		70mcg/mL
Salicylates (USA, Salicylates screen)		50 mg/dL
Ethylene Glycol (EG, Antifreeze)		5 mg/dL if initial sample
Iso-propanol (ISP, Rubbing alcohol)		10 mg/dL if initial sample
Methanol (MTH, Wood Alcohol)		10 mg/dL if initial sample
Theophylline (THE, Elixophyllin)		25 mcg/mL
Phenytoin (Dilantin)		40 mcg/mL
Carbamazepine (Tegretol)		20 mcg/mL
Phenobarbital		60 mcg/mL
Valproic acid (Depakene, Depakote, Valproate)		200 mcg/mL
Vancomycin		≥ 30 mcg/mL
<b>COAGULATION</b>		
PT Prothrombin Time/INR)		INR > 7.0
PTT - Partial Thromboplastin Time (aPTT, Activated Partial Thromboplastin Time)		> 200 sec.
Fibrinogen	< 60 mg/dL	
<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 and no prev. within 7 days. <5000/ul always called regardless of previous	
Peripheral smear differential	Blasts - Adults > 5%, Blast - Children > 10%	
Peripheral smear morphology	Red cell fragments with decreased platelets on smear. (<50,000 or a 50% change)	
CSF (Cerebrospinal Fluid)	Presence of Cryptococcal-like yeast or intracellular bacteria	