

Critical Laboratory Results

BLOOD BANK			
Blood Bank		Hemolytic Transfusion Reaction	
BLOOD GAS			
TEST		Low	High
PCO ₂ (Capillary and Arterial)		< 25 mmHg	> 55 mmHg
pH (Capillary and Arterial)		≤ 7.249	≥ 7.651
PO ₂ (Capillary and Arterial)		≤ 55 mmHg	n/a
CHEMISTRY			
TEST		Low	High
Ammonia	Peds (<18 yrs)	None	>200 umol/L
CO ₂ (Bicarbonate)	Adult	≤ 10.0 mMol/L	None
	NB (0-28 days)	≤ 15.0 mMol/L	None
Bilirubin, Total		None	≥ 17.0 mg/dl
NICU ONLY Bilirubin, Total	≤ 24 hrs	None	≥ 5.0 mg/dl
	1-2 days	None	≥ 8.0 mg/dl
	3-5 days	None	≥ 12.0 mg/dl
	>5 days	None	≥ 17.0 mg/dl
Calcium		≤ 6 mg/dl	≥ 13 mg/dl
CSF Glucose		≤ 35 mg/dl	≥ 440 mg/dl
Drug Assays (See separate sheet)		All toxic levels and positive drug screens	
Glucose (Serum and Plasma)	Adult	< 40 mg/dl	≥ 500 mg/dl
	Peds (29 days -12 yrs)	≤ 40 mg/dl	
	NB ≤24 hrs	≤ 40 mg/dl	≥200 mg/dl (All newborn)
	NB (>24 hrs - 28 days)	≤ 55 mg/dl	
Lactic Acid (includes blood gas analyzer & i-STAT)		None	≥ 4.0 mMol/L
Magnesium		≤ 1.0 mg/dl	≥ 9.0 mg/dl
Osmolality (Serum and Plasma)		≤ 250 mOsm/Kg	≥ 325 mOsm/Kg
Phosphorus		≤1.0 mg/dl	None
Potassium (Serum and Plasma)	Peds-Adult	≤ 2.8 mMol/L	≥ 6.0 mMol/L
	NB (0-28 days)	≤ 2.5 mMol/L	≥ 7.0 mMol/L
Sodium (Serum and Plasma)	Adult	≤ 120 mMol/L	≥ 160 mMol/L
	Peds (≤ 18 yrs)	≤ 125 mMol/L	≥ 160 mMol/L
TRPQ (Quantitative Troponin)		None	> 0.5 ng/ml
Procalcitonin		None	>2.00 ng/ml
HEMATOLOGY			
TEST		Low	High
CSF Cell Count		None	≥ 20 WBC
FDP (Fibrin Degradation Products)		None	≥ 20 ug/ml
Fibrinogen		≤ 100 mg/dl	None
Hematocrit	Peds - Adult	≤ 20.0 %	≥ 65.0 %
	NB ≤ 7 days	≤30.0 %	≥70.0 % (All newborn)
	NB > 7-28 days	≤25.0 %	
Hemoglobin	Peds-Adult	≤ 7.0 gm/dl	≥ 20.0 gm/dl
	NB ≤ 7 days	≤ 10.0 gm/dl	≥ 20.0 gm/dl
Platelet	Peds-Adult	≤ 40 K/ul	≥ 900 K/ul
	NB ≤7 days	≤ 100 K/ul	≥1000 K/ul (All newborn)
	NB >7-28 days	≤ 50 K/ul	
INR		None	> 4.0
PTT		None	≥ 125 seconds
WBC	Peds - Adult	≤ 2.0 K/ul	≥ 75.0 K/ul
	NB (0-28 days)	< 5.0 K/ul	> 30.0 K/ul

The contents of this document rescind any previous document covering similar material.
The online version of this document is deemed current. Revised by Laboratory Outreach: 09/10/2024

Toxic Concentration of Drugs

Test	Toxic Level
Acetaminophen	≥ 150 ug/ml 4 hrs after ingestion
	≥ 50 ug/ml 12 hrs after ingestion
Amikacin	Peak: ≥ 35 ug/ml
	Trough: ≥ 10 ug/ml
Carbamazepine (Tegretol)	> 15 ug/ml
Digoxin	≥ 2.5 ng/ml
Dilantin (Phenytoin)	> 30 ug/ml
Ethanol	≥ 300 mg/dl
Gentamicin	Peak: ≥ 12.0 ug/ml
	Trough: ≥ 2.3 ug/ml
Lidocaine	≥ 6 ug/ml
Phenobarbital	≥ 60 ug/ml
Salicylate	≥ 30 ug/ml
Theophylline	≥ 20 ug/ml
Tobramycin	Peak: > 12.0 ug/ml
	Trough: > 2.3 ug/ml
Valproic Acid (Depakene)	≥ 150 ug/ml
Vancomycin	Trough > 25 ug/ml

MICROBIOLOGY/MISCELLANEOUS SIGNIFICANT RESULTS

The following Microbiology findings are considered significant and will be called to the appropriate unit, doctor, or office and documented as outlined in the "Critical Values" policy.

1. Positive normally sterile body fluid gram stain or initial culture (CSF, Peritoneal, Pleural, Synovial, Pericardial, etc.)
2. Positive blood cultures gram stain
3. Positive blood culture ID of Staph. Aureus or MRSA by culture or NAAT
4. Positive AFB smear or initial culture
5. Culture positive for Histoplasma, Coccidioides, or Blastomyces.
6. Organisms listed as Category A agents
7. Cultures or EIA positive for E.coli 0157/H7 or other shiga toxin producing E.coli.
8. Organisms listed as Telephone Reportable on the current State of Florida Reportable Disease list
9. Positive Cryptococcus AG test
10. Positive NAAT test on CSF for any virus or bacteria
11. Positive Legionella Urinary AG
12. Positive Strep. pneumo. CSF AG
13. Culture positive for Neisseria meningitides
14. Initially positive malaria films
15. Unusual result that the Tech finds exceptional or critical not listed above.
16. Any positive MDRO result (inpatients and facility patients)
NAAT: MRSA, VRE or C.diff
Culture: MRSA, VRE, CRE, ESBL and any organism resistant to 2 or more classes of antibiotics not normally resistant.