

The University of Chicago Medical Center Laboratories

APPENDIX 1 - Critical Value List

| Clinical Chemistry (Serum) | | | | |
|--------------------------------------------------|-------------|------------|-------------|------------------|
| <u>Analyte</u> | <u>Unit</u> | <u>Low</u> | <u>High</u> | <u>Age Range</u> |
| Bilirubin Total, Newborn | mg/dL | ---- | >18 | 0-14 days |
| Calcium | mg/dL | < 6.0 | >13 | Any Age |
| Carbon Dioxide, Total | mmol/L | < 10 | >40 | Any Age |
| Glucose | mg/dL | < 40 | >500 | Any Age |
| Glucose, Newborn | mg/dL | < 30 | >300 | 0-14 days |
| Magnesium | mg/dL | < 1.0 | >8 | Any Age |
| Phosphate | mg/dL | < 1.0 | ---- | Any Age |
| Potassium | mmol/L | < 2.8 | >6.2 | Any Age |
| Potassium Newborn | mmol/L | < 2.8 | >8 | 0-14 days |
| Sodium | mmol/L | < 120 | >160 | Any Age |
| | | | | |
| | | | | |
| Clinical Chemistry Toxicology/TDM (Serum) | | | | |
| <u>Analyte</u> | <u>Unit</u> | <u>Low</u> | <u>High</u> | <u>Age Range</u> |
| Acetaminophen | ug/mL | ---- | > 150.0 | Any Age |
| Amikacin | ug/mL | ---- | > 40.0 | Any Age |
| Carbamazepine | ug/mL | ---- | > 20.0 | Any Age |
| Digoxin | ng/mL | ---- | > 3.0 | Any Age |
| Gentamicin | ug/mL | ---- | > 10.0 | Any Age |
| Lidocaine | ug/mL | ---- | > 9.0 | Any Age |
| Lithium | mmol/L | ---- | > 2.00 | Any Age |
| Phenobarbital | ug/mL | ---- | > 60.0 | Any Age |
| Phenytoin | ug/mL | ---- | > 40.0 | Any Age |
| Salicylate | mg/dL | ---- | > 30.0 | Any Age |
| Theophylline | ug/mL | ---- | > 25.0 | Any Age |
| Tobramycin | ug/mL | ---- | > 10.0 | Any Age |
| Valproic Acid | ug/mL | ---- | > 200 | Any Age |
| Vancomycin | ug/mL | ---- | > 50.0 | Any Age |

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| <u>Coagulation</u> | | | | |
|---------------------------|--------------------|-------------------|--------------------|-------------------------|
| <u>Analyte</u> | <u>Unit</u> | <u>Low</u> | <u>High</u> | <u>Age Range</u> |
| Activated PTT | sec | | > 100.0 | Any Age |
| ADAMTS-13 | % | ≤ 10 | | Any age |
| PT INR | | | ≥ 4.0 | Any Age |
| Fibrinogen | mg/dL | | < 80 | Any Age |

Hematology

Inpatients & ED: The laboratory calls critical values the first time the limit is exceeded. Whenever a value falls outside the critical range and then becomes critical again, a new call is made.

Outpatients: The laboratory calls critical values the first time the limit is exceeded. A new call is made every 48 hours if the value for the test is critical.

All patients: If the HCT is less than 15% and/or platelets are less than 10,000/uL the results will be called each time the value of the test is critical.

| <u>Analyte</u> | <u>Unit</u> | <u>Low</u> | <u>High</u> |
|-----------------------|--------------------------------------------------------------|-------------------|--------------------|
| Hematocrit | % | < 20 | > 60 |
| Hemoglobin | gm/dL | < 6.0 | > 20.0 |
| Platelet Count | per uL | < 30,000 | > 1,000,000 |
| White Cell Count | per uL | < 1,000 | > 30,000 |
| White Cell Diff | < 500 Neutrophils /uL when the WBC is greater than 1000 /uL. | | |
| Blast Cells | > 4% from outpatient/ emergency room patients | | |

When smears indicate that a platelet count is markedly decreased (less than 30,000/uL), but no platelet count was ordered, a platelet count is automatically performed and called as a Critical Value if less than 30,000/uL and the inpatient's previous platelet count was not critical or the outpatient's previous platelet count was not critical or not called in the past 48 hours.

Intracellular organisms and intracellular and extracellular parasites in: blood, CSF, pericardial fluid, peritoneal fluid (paracentesis), pleural fluid, synovial fluid; intracellular and extracellular yeast and pneumocystis in BAL.

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Microbiology

Blood: Initial presence of organisms by microscopic examination or growth is a critical value. No notification of additional positive cultures will be made within 3 days of the first notification if gram stain morphology or organism identification remains the same.

Bone Marrow: Positive for organisms by microscopic examination or culture growth.

CSF: Positive for organisms by microscopic examination or culture growth, or detection of organism-specific nucleic acid (PCR) in CSF. First-time positive *Cryptococcus* Latex Agglutination.

Rapid Response Laboratory

Blood Gas - Whole Blood

| <u>Analyte</u> | <u>Unit</u> | <u>Low</u> | <u>High</u> | <u>Age Range</u> |
|--------------------------|-------------|------------|------------------------------------------------|------------------|
| pH | - | <7.20 | >7.60 | Any age |
| pH Cord Gas | - | <7.00 | - | Cord blood only |
| PCO2 | mmHg | <20 | >80 <i>or</i> >70 and <80 when pH < 7.30 | Any age |
| PO2 (arterial) | mmHg | <20 | - | Any age |
| Glucose | mg/dL | <40 | >500 | Any age |
| Sodium (Na) | mEq/L | <120 | >160 | Any age |
| Potassium (K) | mEq/L | <2.8 | >6.2 | Any age |
| tHb (total Hemoglobin) | g/dL | <6 | - | Any age |
| COHb (Carboxyhemoglobin) | % | >20 | - | Any age |
| MetHb (Methemoglobin) | % | >10 | - | Any age |