

VCUHS Pathology Laboratories
Phone: 804-828-7284 Fax: 804-628-8724
Summary Table of Critical Values Updated 6/12/07

| Test | Reference Ranges | Test Values <= unless noted | Test Values >= unless noted |
|--|-------------------------------------|---|-----------------------------|
| BODY FLUIDS | | | |
| | | Presence of bacteria or yeast after smear confirmation | |
| | | Presence of blasts or neoplastic cells after smear confirmation | |
| CSF (WBC) | (0-5 cells) | | WBC>=200mm ³ |
| CHEMISTRY | | | |
| Calcium <7days | 6.0-12.0 mg/dL | <6.0 mg/dL | >12.0 mg/dL |
| 8 days-10 years | 9.4-10.9 mg/dL | <6.6 mg/dL | >12.0 mg/dL |
| 11 y to adult Male | 9.2-10.7 mg/dL | <6.6 mg/dL | >12.0 mg/dL |
| 11 y to adult Female | 8.9-10.5 mg/dL | <6.6 mg/dL | >12.0 mg/dL |
| Glucose Adult | 65-100mg/dL (fasting) | <50 mg/dL | >500 mg/dL |
| 1 mo-3 yrs | 60-100 mg/dL | <50 mg/dL | >500 mg/dL |
| <30 days | 40-90 mg/dL | <40 mg/dL | >500 mg/dL |
| Lithium | 0.5-1.5 mmol/L | NA | >2.0 mmol/L |
| Magnesium | 1.8-2.4 mg/dL | <1.0 mg/dL | >4.9 mg/dL |
| Phosphorus | 2.5-4.6 mg/dL | <1.3mg/dL | NA |
| Potassium | 3.6-5.1 mmol/L | <2.8 mmol/L | >6.1 mmol/L |
| <3days | 5.0-7.5 mmol/L | <2.8 mmol/L | >7.5 mmol/L |
| 3 days - 3 months | 4.0-6.2 mmol/L | <2.8 mmol/L | >6.2 mmol/L |
| Sodium | 135-145 mmol/L | <125 mmol/L | >155 mmol/L |
| COAGULATION | | | |
| Activated partial thromboplastin time (APTT) | 25-38 sec | | >150 sec |
| D-Dimer | <0.41 ug/mL FEU | | >5.0 ug/mL FEU |
| Fibrin split products | <5 ug/mL | | >20 ug/mL |
| Fibrinogen | 180-450mg/dL | <60mg/dL | |
| Heparin Induced Platelet Antibody | Negative | | Positive |
| Protime (PT) | Call Laboratory for Reference Range | | >=56 sec, INR ≥5.0 |

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| HEMATOLOGY | | | |
|---|--|--|--|
| Hgb | For Age Specific Reference Ranges Refer to Pathology Directory of Laboratory Services Appendices | ≤ 7.0 g/dL | ≥ 20.0 g/dL* (Except newborn infants.) |
| Hct (Only if Hgb is not reported) | For Age Specific Reference Ranges Refer to Pathology Directory of Laboratory Services Appendices | $\leq 20.00\%$ | |
| Plt | For Age Specific Reference Ranges Refer to Pathology Directory of Laboratory Services Appendices | $\leq 40(x10^9/L)$ | $\geq 1000(x10^9/L)$ |
| WBC | For Age Specific Reference Ranges Refer to Pathology Directory of Laboratory Services Appendices | $\leq 2.0(x10^9)$ | $\geq 50.0(x10^9/L)$ |
| Peripheral Smear Findings | | Presence of blasts, intra, or extra cellular organisms determined as clinically relevant by Pathologist. | |
| Critical values are called each occurrence except on inpatients with known hematologic disturbance. | | | |
| IMMUNOLOGY | | | |
| Cryptococcal Antigen (first time positive to ID) | Negative | Positive | |
| HIV Ab/Western blot | Negative | Positive | |
| RSV Antigen | Negative | Positive | |
| Viral Isolation | No virus isolated | Positive | |
| MICROBIOLOGY | | | |
| AFB cultures | No growth | Positive | |
| AFB smears | No AFB seen | Positive | |
| Blood cultures | No growth | Positive | |
| Bordetella pertussis FA | Negative | Positive | |
| CSF cultures | No growth | Positive | |
| CSF Gram stain | No organism seen | Positive | |
| Cultures positive for the growth of: Brucella species, Bordetella pertussis, Clostridium botulinum, Corynebacterium diphtheriae, Francisella tularensis, Listeria species, Streptococcus Group A – from sterile sites or wounds only, Yersinia pestis | No growth | Positive | |

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| Legionella culture or antigen | No growth/Negative | Positive | |
| Malaria Smears | Negative | Positive | |
| Mycology cultures (from sterile sites only) | No growth | Positive | |
| Shiga Toxin antigen | Negative | Positive | |
| MOLECULAR DIAGNOSTICS | | | |
| Herpes Simplex Virus by PCR | Negative | Positive | |
| TOXICOLOGY | | | |
| Acetaminophen | 10-20 mg/mL | | 100mg/mL |
| Alcohols | | | |
| Acetone | Negative | | 1000 mg/L |
| Ethanol | Negative | | 4000 mg/L |
| Isopropanol | Negative | | 200 mg/L |
| Methanol | Negative | | 200 mg/L |
| Aluminum | Dialysis patient<40ug/L Environmental Exposure: 0-9 ug/L | | >60 ug/L |
| Amikacin | | | |
| Trough | 1-8 mg/L | | 10 mg/L |
| Peak | 25-35 mg/L | | 40 mg/L |
| Anticonvulsants | | | |
| Carbamazepine | 7-12 mg/L | | 15 mg/L |
| Phenobarbital | 15-40 mg/L | | 50 mg/L |
| Phenytoin | 10-20 mg/L | | 40 mg/L |
| Primidone | 5-12 mg/L | | 15 mg/L |
| Barbiturate Scan | | | |
| Amobarbital | 1-5 mg/L | | 10 mg/L |
| Butobarbital | 1-5 mg/L | | 10 mg/L |
| Butalbital | 1-5 mg/L | | 10 mg/L |
| Pentobarbital | 1-5 mg/L | | 10 mg/L |
| Secobarbital | 1-2 mg/L | | 5 mg/L |
| Caffeine Adults | 3-15 mg/L | | 50 mg/L |
| Caffeine Children | 8-20 mg/L | | 50 mg/L |
| Chloramphenicol | | | |
| Trough | 5.0-10.0 mg/L | | 25 mg/L |
| Peak | 10-20 mg/L | | 25 mg/L |
| Chlordiazepoxide | 0.5-3.0 mg/L | | 5 mg/L |
| Clonazepam | 0.015-0.060 mg/L | | 0.08 mg/L |
| Desipramine | 40-160 ng/mL | | 400 ng/mL |
| Digoxin | 0.5-2.0 ng/mL | | 2.4 ng/mL |
| Doxepin | 50-100 ng/mL | | 400 ng/mL |
| Ethosuximide | 40-100 mg/L | | 150 mg/L |

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| | | | |
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| Ethylene glycol | Negative | | >0 |
| Gabapentin | 2.0-15.0 mg/L | | 20 mg/L |
| Gentamicin | | | |
| Trough | 0.5-2.0 mg/L | | 2.0 mg/L |
| Peak | 5.0-10.0 mg/L | | 12 mg/L |
| Haloperidol | 2.0-20.0 ng/mL | | 50 ng/mL |
| TOXICOLOGY | | | |
| Heavy Metals | none detected | | any positive |
| Ibuprofen | 10-50 mg/L | | 200 mg/L |
| Lidocaine | 1-5 mg/L | | 6 mg/L |
| Lithium Saliva | 1.0-3.0 ng/dL | | 3.50 ng/dL |
| Lithium RBC | 0.2-0.8 ng/dL | | 0.9 ng/dL |
| Methotrexate | Subject to MD Interpretation | | |
| N-acetyl procainamide (NAPA) | Not defined | | 40 mg/L |
| Norchlordiazepoxide | 0.2-0.7 mg/L | | |
| Nortriptyline | 50-150 ng/mL | | 400 ng/mL |
| Phenytoin Free | 1-2 mg/L | | 4 mg/L |
| Procainamide | 4-10 mg/L | | 16 mg/L |
| Quinidine | 2-5 mg/L | | 10 mg/L |
| Salicylate | 150-250 mg/L | | 500 mg/L |
| Theophylline | | | |
| Newborn | 8-12 mg/L | | 25 mg/L |
| Children/Adults | 10-20 mg/L | | 40 mg/L |
| Tobramycin | | | |
| Trough | 0.5-1.5 mg/L | | 12.0 mg/L |
| Peak | 5.0-10.0 mg/L | | 12.0 mg/L |
| Tricyclics Total | 50-100 ng/mL | | 500 ng/mL |
| Valproic Acid | 50-100 mg/L | | 200 mg/L |
| Vancomycin | | | |
| Trough | 5-10 mg/L | | 90 mg/L |
| Peak | 30-40 mg/L | | 90 mg/L |
| URINALYSIS | | | |
| Ketones | negative | | >= 80mg/dL (4+) |