



**Deaconess  
Hospital**  
LABORATORY

**CHEMISTRY CRITICAL VALUES**

TEST	LOW	POSSIBLE EFFECT	HIGH	POSSIBLE EFFECT
24 hour Urine Protein for O.B.			>300mg/24hr	Pre-eclampsia
Bicarbonate (Serum)	<10 MEG/L	Complex interwoven pattern of acidosis, alkalosis and anoxemia	>40 MEG/L	Complex interwoven pattern of acidosis, alkalosis and anoxemia
Bilirubin, Neonatal			≥ 15 mg/dl	
Bilirubin, Cord Blood			≥ 3.0 mg/dL	
Calcium	<6 mg/dL	Tetany and convulsions	>14 mg/dL Newborn (0-3 mos.) >12 mg/dL	Coma
Ionized Calcium	<0.78 mmol/L		>1.57 mmol/L	
Glucose	<40 mg/dL	Brain damage	>500 mg/dL Newborn (0-3 mos.) >200 mg/dL	Diabetic coma
Magnesium	<1 mg/dL	Tetany	>5 mg/dL	Increase in atrioventricular conduction
Potassium	<2.5 mEq/L	Muscle weakness, paralysis, cardiac arrhythmia's	>6.5 mEq/L Newborn (0-3 mos.) >7 mEq/L	Cardiotoxicity with arrhythmia's
Sodium	<120 mEq/L	Dehydration and vascular collapse	>160 mEq/L Newborn (0-3 mos.) >155 mEq/L	Edema, hypervolemia, heart failure
pH (arterial capillary)	<7.2	Severe acidosis, life threatening	>7.6	Severe alkalosi, life threatening
pO2 (arterial or capillary)	<40 mmHg	Complex interwoven pattern of acidosis, alkalosis, and anoxemia		
PCO2 (arterial or capillary)	<20 mmHg Newborn (0-3 mos.) <30 mmHg	Complex interwoven pattern of acidosis, alkalosis, and anoxemia	>70 mmHg	Complex interwoven pattern of acidosis, alkalosis, and anoxemia

Taken from internal DH chem/hemo documents 4/24/07 MB



**THERAPEUTIC DRUG CRITICAL LEVELS**

TEST	LOW	POSSIBLE EFFECT	HIGH	POSSIBLE EFFECT
Digoxin			>3.0 ng/mL	Gastrointestinal and CNS symptoms, disturbance of cardiac rhythm
Dilantin (Phenytoin)			>30 ug/mL	
Gentamicin			>12 ug/mL peak	Hypoventilation, ototoxicity, nephrotoxicity
Lithium			>2.0 mmol/L	
Phenobarbital			>40 ug/mL	nausea, vomiting, diplopia, dizziness, ataxia, lethargy, coma
Theophylline			>24 ug/mL	Nausea, insomnia, nervousness, headaches, arrhythmia's, seizures
Tobramycin			>12 ug/mL	Hypoventilation, ototoxicity, nephrotoxicity
Valproic Acid			>150 ug/mL	
Vancomycin			>80 ug/mL	

**TOXICOLOGY DRUG CRITICAL LEVELS**

TEST	LOW	POSSIBLE EFFECT	HIGH	POSSIBLE EFFECT
Acetaminophen			>50	(potentially toxic if >12 hours since ingestion)
Alcohol			>400 mg/dL	
Salicylate			>30 mg/dL	

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**HEMATOLOGY CRITICAL VALUES**

TEST	LOW	POSSIBLE EFFECT	HIGH	POSSIBLE EFFECT
Hematocrit	≤ 18%	Heart failure and anoxemia	None	
Hemoglobin	≤ 6 gm	Heart failure and anoxemia	≥20.0	
Platelet Count	≤ 20,000	Hemorrhage	≥ 1,000,000	Hemorrhage, thrombosis
INR	None		≥5.0 INR	Hemorrhage
I/T Ratio			> 0.25	
PFA	None		EPI >300 ADP >300	Hemorrhage
Low Molecular Weight Heparin			≥ 1.3 IU/mL	
IMNET I/T Ratio (Gateway Only)			>0.25	

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**OTHER SIGNIFICANT RESULTS**

TEST	ACTION TAKEN
HIV from Source of Body/Blood fluid exposure	All are called to Deaconess Hospital Comp Center for DH/GWH exposures or to the phone number provided ASAP after screen results are obtained.
Hepatitis A Antibody	Positives are faxed to ordering physician and called to Infection Control (3449) on day shift Monday – Friday or to Vanderburgh County Health Department.
Hepatitis B Surface Antigen	Positives are faxed to the ordering physician Monday – Friday and are reported to Indiana State Department of Health (ISDH) weekly.
Hepatitis C Antibody	Positives are faxed to the ordering physician Monday – Friday and are reported to Indiana State Department of Health (ISDH) weekly.
HIV	Confirmed positives are faxed to ordering physician Monday – Friday and are reported to Indiana State Department of Health (ISDH) weekly.

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**LABORATORY  
SIGNIFICANT RESULTS IN MICROBIOLOGY**

The following **positive** cultures, stains or serological results are called to the physician OR to the unit where the patient is assigned. **INPATIENTS:** Significant results are given to nurse caring for patient. They will notify physician. **OUTPATIENT:** Significant results are given to office staff, nurse preferred.

<b>TEST</b>	<b>RESULT CALLED</b>
AFB	Stain, culture, sensitivity results
Blood Culture	Stain, positive rapid coagulase,
Blood Parasite smears	First positive smear with % parasitemia
Bordetella pertussis	Positive culture, DFA, PCR
Clostridium difficile toxins A & B	First positive test
Cryptococcal antigen	First positive test
CSF	Stain, Culture, sensitivity
ESBL Gram Negative Rods	First Positive Culture
Eye Culture	Positive culture for aspirate/scraping
Fungi	Significant isolate
Herpes Simplex	Positive culture from eye, sterile body site, tissue or any site for neonate/newborn
Influenza A and B (rapid test)	Positive to physician offices
Legionella Urinary Antigen	Positive
Multi Drug Resistant Organism*	KPC, VISA, VRSA, Acinetobacter and others considered MDRO (first isolate)
Neisseria meningitidis	Blood, CSF, sterile body site stain and/or culture
Penicillin resistant streptococcus pneumoniae	First Positive
RSV (rapid test)	Positive to physician offices
Sterile body sites	Stain or positive culture
*Streptococcus pneumoniae urinary antigen	Positive
Stool Pathogens	Salmonella, Shigella, Yersinia, Campylobacter, E. coli 0157, Vibrio, Aeromonas, Giardia or Cryptosporidium antigen, parasites, Shiga Toxin 1 or 2
Vancomycin Resistant Enterococcus (VRE)	First Positive
Viruses from Respiratory Culture	Adenovirus, RSV, Influenza A and B, Parainfluenze 1, 2, 3

Others as deemed appropriate by supervisor or pathologist.

\*denotes changes

Revised: 2/04, 3/07, 8/07, 10/07, 8/08, 7/09, 10/09