

## Critical Values List – UH Clinical Laboratory

### Arterial Blood Gases:

Test	Value	Comments
pH	$\leq 7.25$ or $\geq 7.6$	
PCO <sub>2</sub>	$\leq 20$ or $\geq 60$ mm Hg	
PO <sub>2</sub>	$\leq 40$ mm Hg	
Hemoglobin	$\leq 10$ g/dL	

### Transfusion Service (Blood Bank):

Test	Value	Comments
Antibody Screen	Positive	
DAT (Direct Coombs)	Positive	

### Chemistry:

Test	Value	Comments
Acetaminophen	$>150$ µg/mL $>40$ µg/mL	@ 4 hours post ingestion @ 12 hours post ingestion
Amikacin	$>30$ µg/mL	Peak - draw 30 min post infusion.
	$>8$ µg/mL	Trough - draw 30 min before infusion
Bicarbonate (Total CO <sub>2</sub> )	$<10$ or $>40$ mmol/L	
Bilirubin, Total	$>15.0$ mg/dL	
Calcium, Ionized	$\leq 0.78$ or $\geq 1.58$ mmol/L	
Calcium, Total	$<6.0$ or $\geq 13.0$ mg/dL	
Carbamazepine	$>20$ µg/mL	Trough
Digoxin	$>2.4$ ng/mL	Trough - draw 8-12 hr. post dose. Minimum post dose 6 hours
Ethanol	$>250$ mg/dL	
Ethosuximide	$>150$ µg/mL	Trough
Gentamicin	$>12$ µg/mL	Peak - draw 30 min. post infusion.
	$>2$ µg/mL	Trough - draw 30 min. before infusion.
Glucose	$<40$ or $>450$ mg/dL	
Iron	$>300$ µg/dL	
Lidocaine	$>9$ µg/mL	$> 30$ min. post IV dose after steady state (5-10 hours)
Lithium	$\geq 1.6$ mmol/L	Trough
Magnesium	$\leq 1.0$ or $\geq 9.0$ mg/dL	
Phenobarbital	$>50$ µg/mL	Trough, 3 months – adult
	$>40$ µg/mL	Trough, 0 -3 months

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### Chemistry, continued

Test	Value	Comments
Phenytoin	>30 µg/mL	Trough, 3 months – adult
	>14 µg/mL	Trough, 0 - 3 months
Phosphorus	<1.0 or >9.0 mg/dL	
Potassium	<3.0 or >6.1 mmol/L	
Procainamide NAPA	>12 µg/mL	
	>35 µg/mL	Trough
Quinidine	>10 µg/mL	Trough
Reducing Substance-Urine	Positive	Up to 3 years of age
Salicylate	>30 mg/dL	
Sodium	<120 or >160 mmol/L	
Tacrolimus	>25 ng/mL.	Trough
Theophylline	>25 µg/mL	Trough, 6 months – adult
	>20 µg/mL	Trough, 0 - 6 months
TCA - Tricyclics	>400 ng/mL	
Tobramycin	>12 µg/mL	Peak – draw 30 min post infusion.
	>2 µg/mL	Trough – draw 30 min. before infusion
Valproic Acid	>150 µg/mL	Trough
Vancomycin	>80 µg/mL	Trough
	>80 µg/mL	Peak (not recommended)

### Coagulation:

Test	Value	Comments
Fibrinogen	≤100 mg/dL	
INR	≥5.0	
Protime	≥47.5 seconds	
PTT	≥85 seconds	

### Hematology:

Test	Value	Comments
Hematocrit	≤21% or ≥65%	
Hemoglobin	≤7 or >21.0 g/dL	Hemoglobin
Platelet Count	≤20 or ≥1000 x 10 <sup>3</sup> /mcl	
White Blood Cell Count	≤2.0 or ≥40 x 10 <sup>3</sup> /mcl	

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### Microbiology:

Test	Value	Comments
Cerebrospinal Fluid	Positive	Gram Stain
Blood	Positive	Gram Stain
Sterile Body Fluid	Positive	Gram Stain
Tissue	Positive	Gram Stain
Corneal Scrapings	Positive	Gram Stain
Intraocular Fluid	Positive	Gram Stain
Eye Culture	Positive	Gram Stain

### POC (Point-of-Care):

Test	Value	Comments
Glucose, WB	<60 or >450 mg/dL	
Glucose, WB, neonatal	<40 or >200 mg/dL	

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