



Laboratory Critical Value Policy (System)

Aspirus Laboratories Critical Results List:

Test	Units	Critical Result	Notes
CHEMISTRY			
ABG pCO ₂	mmHg	<20 and >70	
ABG pH	mmHg	<7.20 and >7.60	All blood pH (not just ABG)
ABG pO ₂	mmHg	<40	
Acetaminophen	ug/mL	>100	
Bilirubin, Total	mg/dL	>15	<1 year old only
Calcium	mg/dL	<6.5 and >13.0	
Calcium, Ionized	mg/dL	<3.0 and >6.0	
Carbamazepine	ug/mL	>15	
Carbon Monoxide	%	>15	
Digoxin	ng/mL	>3.0	
Gentamicin (Peak)	ug/mL	>10.0	Outpatient only
Gentamicin (Trough)	ug/mL	>2.0	Outpatient only

Test	Units	Critical Result	Notes
Glucose, CSF	mg/dL	<35	
Glucose, Serum	mg/dL	<40 and >400	
Heparin Associated Antibody	Qualitative	Positive	
Lithium	mEq/L	≥ 1.6	
Magnesium	mg/dL	<1.0 and >3.5	
		<1.0 and >8.4	Women in inpatient Birthing/OB units
Phenobarbital	ug/mL	>55	
Phenytoin	ug/mL	>30	
Phosphorus	mg/dL	<1.0	
Potassium	mEq/L	<3.0 and >6.0	
Salicylates	mg/dL	>40	
Sodium	mEq/L	<123 and >155	
Theophylline	ug/mL	>25	
Tobramycin (Peak)	ug/mL	>12	
Tobramycin (Trough)	ug/mL	>2.5	
Valproic Acid	ug/mL	>150	
Vancomycin (Peak)	ug/mL	>60.0	Outpatient Only

Test	Units	Critical Result	Notes
Vancomycin (Trough)	ug/mL	>30.0	Outpatient Only
HEMATOLOGY / COAGULATION			
Activated Partial Thromboplastin Time (aPTT)	seconds	>145	
Fibrinogen	mg/dL	<100	
Hemoglobin	g/dL	<7.0 and >20.0	>=14 days old. Excludes Oncology inpatients
		<7.0 and >22.2	<14 days old.
INR	units	>5.0	
Peripheral Blood Smear	Qualitative	Positive for Malaria, Anaplasma/Ehrlichia or Babesia	Initial smear identification only
Platelet Count	K/cmm	<=40 and >1000	Excludes Oncology Inpatients
WBC, Blood	K/cmm	<1.5	Excludes Oncology Inpatients
WBC, Cerebrospinal Fluid	Cells/cmm	>100	
TRANSFUSION SERVICES			
Antibody Screen	Qualitative	Positive	New antibodies and all surgical patients
Direct Antiglobulin Test	Qualitative	Positive	Newborns Only

Test	Units	Critical Result	Notes
Transfusion Reactions	Qualitative	Identified	Only serious reactions including: hemolytic, bacterial contamination, anaphylaxis, and TRALI
Microbiology			
Direct Smears	CSF with organisms present		
	Fungus smears (KOH, GMS) with possible systemic fungi (Blastomyces, Histoplasma, Coccidioides, or Pneumocystis)		
	Wound with possible Clostridia (large gram variable/gram positive rods)		
Antigen, Culture, Nucleic Acid Test (NAT) Results:	CSF with infectious agent detected by culture or NAT		
	Eye cultures with <i>Pseudomonas aeruginosa</i>		
	Blood culture with organisms on gram stain, other than gram positive cocci in clusters in a single bottle that is greater than 24 hours old		
	Fungus cultures with possible <i>Blastomyces</i> , <i>Histoplasma</i> , <i>Coccidioides</i> or <i>Cryptococcus neoformans</i> (when smears are negative)		
	Isolates of MRSA, ESBL, VRSA, VRCoNS, CRE (carbapenem resistant enterobacteriaceae), and VRE from sites of active infection or sterile body fluid		
	CSF positive Cryptococcus antigen		
	Stool with <i>Clostridium difficile</i> toxin detected		

Test	Units	Critical Result	Notes
			Stool with <i>Shigella</i> or <i>E. coli</i> 0157:H7 detected by culture or NAT
			Stool with positive Shiga toxin 1 or 2 or stx gene

Note for Microbiology: If a critical result has been called within 3 days for an organism, an additional positive result for the same apparent organism will not be called as a critical result.