

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
Glucose, CSF	mg/dL	<35	
Glucose, Serum (< 1 year old)	mg/dL	<40 and >400	
Glucose, Serum (> 1 year old)	mg/dL	<50 and >400	
Heparin Associated Antibody	Qualitative	Positive	

Test	Units	Critical Result	Notes
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
Vancomycin (Trough)	ug/mL	>30.0	Outpatient Only
HEMATOLOGY / COAGULATION			
Activated Partial Thromboplastin Time (aPTT)	seconds	>145	
Fibrinogen	mg/dL	<100	

Test	Units	Critical Result	Notes
Hemoglobin	g/dL	<7.0 and >20.0	>=14 days old.
		<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	
WBC, Blood	K/cmm	<1.5	
WBC, Cerebrospinal Fluid	Cells/cmm	>100	
TRANSFUSION SERVICES			
Antibody Screen	Qualitative	Positive	All surgical patients ER and inpatients/outpatients with pending transfusion orders. <i>Note: Notification of new antibodies without pending transfusion orders are not critical but may be called as a courtesy.</i>
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
Emergency Issued Uncrossmatched Units	Qualitative	Incompatibility	If incompatibility is detected at any stage of testing, immediately notify nursing/patient's provider, and follow-up with the laboratory medical director.
Antibody Titers (non-critical notification)	Quantitative	anti-D/anti-Kell ≥ 16 OR Increase of 2 or more dilutions from previous titer	OB patients ONLY <i>Note: Notification is NOT critical; calls should be made ASAP but can wait for the next business day.</i>
MICROBIOLOGY			
Test	Critical Result and Notes		
Presence of microorganism by direct smear (Gram stain or KOH)	Blood (except positive Blood Culture of GPC in clusters from a single collection and >24 hrs)		
	Broad based budding yeast, consistent with <i>Blastomyces dermatitidis</i>		
	Sterile Body Fluid: Cerebrospinal fluid, amniotic fluid, bone marrow, pericardial fluid		
Presence of microorganism by Culture, NAT or Antigen testing	Blood (if >24 hrs, GPC in clusters, ID is Staph aureus)		
	Blood or CSF with <i>Haemophilus influenzae</i> or <i>Neisseria meningitidis</i>		
	Cryptococcus Antigen		
	Eye sources with <i>Pseudomonas aeruginosa</i>		
	Sterile Body Fluid: Cerebrospinal fluid, amniotic fluid, bone marrow, pericardial fluid not otherwise observed by direct exam		

Test	Critical Result and Notes
Detection of Highly Pathogenic Organisms or Select Antigens by direct exam, culture or NAT.	<i>Bacillus anthracis</i>
	<i>Brucella</i> spp.
	<i>Burkholderia mallei</i>
	<i>Burkholderia pseudomallei</i>
	<i>Clostridium botulinum</i>
	<i>Corynebacterium diphtheria</i> (Diphtheria)
	<i>Francisella tularensis</i>
	Malaria
	Measles Virus
	Monkeypox Virus
	<i>Neisseria meningitidis</i> (Meningoccal disease: CSF, Blood, Joint sources)
	<i>Nocardia</i> spp.
	Poliovirus
	<i>Salmonella typhi</i>
	Variola virus
	<i>Vibrio cholerae</i>
	Viral Hemorrhagic Fevers (Ebola, Crimean-Congo, Lassa, Marburg)
	<i>Yersinia pestis</i>
Detection of Highly Pathogenic Yeast or Dimorphic Mold by Culture or NAT	<i>Blastomyces dermatitidis</i>
	<i>Coccidioides immitis</i>
	<i>Cryptococcus neoformans/gattii</i>
	<i>Histoplasma capsulatum</i>
	<i>Talaromyces</i> (<i>Penicillium</i>) <i>marneffii</i>

Test	Critical Result and Notes
Detection of AFB by culture or NAT	<i>Mycobacterium tuberculosis</i> (1st stain or culture, >90 days since last positive)
	Mycobacterium spp., AFB (1st stain or culture, >90 days since last positive)

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.