



## Kalispell Regional Medical Center Adult and Pediatric Critical Values

Currently accepted laboratory practice is that laboratories monitor test results for exceeding critical values, so that when such occurs, appropriate notification of the responsible health care provider is completed and documented. The list of Critical Values and the procedure for reporting is submitted annually to the committee for review, revision, and approval by Kalispell Regional Medical Center's Hospital Medical Staff.

This form should be used as a quick reference for Adult and Pediatric Critical Values.

\*Always refer to the KRMC Laboratory Critical Value policies for the most accurate Adult and Pediatric Critical Values.  
All critical values are programmed into the KRMC Laboratory Meditech software for exact testing reference.

Mayo Medical Laboratories Critical Values are on the last page

CHEMISTRY				
Analyte	Adult Critical Values		Pediatric Critical Values	
Ammonia	----	>100µmol/dL	----	>100µmol/dL
Blood Gases (Arterial)	----	----	----	----
pH	<7.20	>7.60	<7.25	>7.50
pCO <sub>2</sub>	<20 mmHg	>70 mmHg	<30 mmHg	>50 mmHg
pO <sub>2</sub>	<40 mmHg	----	<50 mmHg	>90 mmHg
pH Cord (Umbilical)	----	----	<7.10	----
BE	----	----	< -9.0	----
Total Bilirubin (newborn)	----	----	----	>20 mg/dL
Calcium, Total	<6.0 mg/dL	>12.0 mg/dL	<6.0 mg/dL	>12.0 mg/dL
Calcium, Ionized	<3.0 mg/dL	>6.0 mg/dL	<2.0 mg/dL	>6.0 mg/dL
Carbon Monoxide	----	>30.0%	----	>20.0 %
Creatinine Kinase (CK)	----	≥10,000 U/L	----	----
Glucose	<50 mg/dL	>500 mg/dL	----	----
< 1 month	----	----	<35 mg/dL	>150 mg/dL
≥ 1 year	----	----	<50 mg/dL	>500 mg/dL
Glucose, Challenge	<50 mg/dL	>500 mg/dL	----	----
Glucose, Tolerance, Diabetes Mellitus	<50 mg/dL	>500 mg/dL	----	----
Glucose Tolerance, Gestational	<50 mg/dL	>500 mg/dL	----	----
Lead 0-15 years (send out test)	----	----	----	>20 mcg/dL
≥16 years	----	>70 µg/dL	----	----
Magnesium	≤1.0 mg/dL	≥6.0 mg/dL	<1.0 mg/dL	>6.0 mg/dL
OB patients	≤1.0 mg/dL	≥10.0 mg/dL	----	----
Phosphorus	≤1.0 mg/dL	----	<1.0 mg/dL	>7.0 mg/dL
Potassium	<3.0 mEq/L	>6.0 mEq/L	----	----
0-2D	----	----	<3.0 mEq/L	>6.4 mEq/L
3D-10D	----	----	<3.0 mEq/L	>7.0 mEq/L
11D-1Y	----	----	<3.0 mEq/L	>7.4 mEq/L
Sodium	<120 mEq/L	>155 mEq/L	----	----
(0-1Y)	----	----	<125mEq/L	>155 mEq/L
Protein (CSF)	----	>100 mg/dL	----	>100 mg/dL
T4, Total	----	----	<3.5 mg/dL	>18.0 mg/dL
T4 (Throxine) Free, Serum < 50 years	----	>7.0 ng/dL	----	----
≥ 50 years	----	>6.0 ng/dL	----	----

HEMATOLOGY		Adult		Pediatric	
Analyte		Critical Values		Critical Values	
Absolute Neutrophil Count		----	----	<500	----
CSF White Cell Count		----	----	----	----
0-12 months		----	----	----	>30 WBC /mcL
1-4 years		----	----	----	>20 WBC /mcL
5 years - puberty		----	----	----	>10 WBC /mcL
Adult		----	>5 WBC / $\mu$ L	----	----
Hemoglobin, all ages		<7.0 g/dL	> 20.0 g/dL	----	----
0- $\leq$ 4 months		----	----	<8.1 g/dL	>21.1 g/dL
> 4 months		----	----	<7.0 g/dL	> 20.0 g/dL
Hematocrit		<15 %	----	----	----
< 2 Month		----	----	<15 %	>69 %
> 2 Month		----	----	<15 %	>55 %
Platelet		<30,000 CMM	>1,000,000 CMM	<30,000 CMM	>1,000,000 CMM
White Blood Count		<1,000 CMM	----	<1,000 CMM	>50,000 CMM

COAGULATION		Adult		Pediatric	
Analyte		Critical Values		Critical Values	
INR		----	>5.0	----	>4.0
PT		----	----	----	>30 sec
PTT		----	>90 sec	----	>90 sec
FIBRINOGEN		$\leq$ 59 mg/dL	----	$\leq$ 59 mg/dL	----

DRUGS (Serum)		Adult		Pediatric	
Analyte		Critical Values		Critical Values	
Acetaminohen		----	>60 $\mu$ g/mL	----	>50 $\mu$ g/mL
Carbamazepine (Tegretol)		----	>20 $\mu$ g/mL	----	>15.0 mcg/mL
Digoxin		----	>2.5 ng/mL	----	>2.5 ng/mL
Gentamicin, Trough		----	>2.5 $\mu$ g/mL	----	>2 $\mu$ g/mL
Gentamicin, Peak		----	>16 $\mu$ g/mL	----	>12 $\mu$ g/mL
Lithium		----	>3.0 mmol/L	----	>1.5 mmol/L
Phenobarbital	(send out test)	----	>60 $\mu$ g/mL	----	>40 $\mu$ g/mL
Phenytoin (Dilantin)		----	>25 $\mu$ g/mL	----	>25 $\mu$ g/mL
Salicylate		----	>30.0 mg/dL	----	>10 mg/dL
Theophylline		----	>25 $\mu$ mol/mL	----	>20 $\mu$ mol/mL
Tobramycin, Trough		----	>2 mcg/mL	----	>2 mcg/mL
Tobramycin, Peak		----	>12 mcg/mL	----	>12 mcg/mL
Valproic Acid		----	>150 $\mu$ g/mL	----	>120 $\mu$ g/mL

MOLECULAR/MICROBIOLOGY			Adult		Pediatric	
TEST	SOURCE		Critical Values		Critical Values	
Acanthamaeba Direct Exam	Ocular, CNS		Positive		Positive	
Blood Borne Parasite Smear/PCR	Blood		Positive		Positive	
Culture	Blood		Positive		Positive	
	Body Fluid		Positive		Positive	
	CSF		Positive		Positive	
	Wound		Positive for Clostridium		Positive for Clostridium	
	Stool		<b><i>Positive For:</i></b> Shiga Toxin positive E. coli Vibrio cholerae		<b><i>Positive For:</i></b> Shiga Toxin positive E. coli Vibrio cholerae	

MOLECULAR/MICROBIOLOGY		Adult Critical Values	Pediatric Critical Values
TEST	SOURCE		
Culture	Any	<b><u>Select Agents:</u></b> Bacillus anthracis Brucella Burkholderia mallei Burkholderia pseudomallei Francisella Tularensis Yersinia pestis Clostridium botulinum Smallpox	<b><u>Select Agents:</u></b> Bacillus anthracis Brucella Burkholderia mallei Burkholderia pseudomallei Francisella Tularensis Yersinia pestis Clostridium botulinum Smallpox
Gram Stain	CSF Body Fluid Cavity Blood Joint Aspirates	Bacteria Present Bacteria Present Bacteria Present Bacteria Present	Bacteria Present Bacteria Present Bacteria Present Bacteria Present
India Ink Smear	CSF	Positive for Cryptococcus	Positive for Cryptococcus
Malaria Antigen Test	Blood	Positive	Positive
Naegleria Direct Exam	Ocular, CNS	Positive	Positive
Ova and Parasite Exam	Stool Liver	Positive for Entamoeba histolytica ---	Positive for Entamoeba histolytica ---
Parasitic Exam	Non intestinal	Strongyloides stercoralis	Strongyloides stercoralis
Smear, Acid Fast	Any	Positive	----

MOLECULAR PCR		Adult Critical Values	Pediatric Critical Values
Bordetella pertusis	Nasopharynx	Positive	Positive
GI Panel	Stool	<b><u>Positive For:</u></b> Vibrio Cholerae Shiga-toxin-producing E.coli Entamoeba histolytica	<b><u>Positive For:</u></b> Vibrio Cholerae Shiga-toxin-producing E.coli Entamoeba histolytica
Group B Streptococcus	Vaginal or Rectal	OB patients ordered "STAT"	Positive
HSV 1,2	CSF, amniotic, ocular	Positive	Positive
Meningitis/Encephalitis Panel	CSF	Positive	Positive
Toxigenic C. Difficile	Stool	Positive	Positive
Toxoplasma gondii PCR	CSF, amniotic	Positive	Positive
Tuberculosis	Any	Positive	Positive
Viral Respiratory Panel	CSF infant < 12 months	Any Positive	Any Positive

Mayo Medical Laboratories Critical Values on the last page

**Critical Values for SEND OUT reference Lab testing to Mayo Medical Laboratories**

Mayo Medical Laboratory Analyte	Adult Critical Values	Pediatric Critical Values
Acetone (Volatile Screen) all specimen types	Any Value mg/dL Detected	
Activated Partial Thromboplastin time, Plasma	---- $\geq 150$ sec	
Amitriptyline/Nortriptyline, S	---- $\geq 300$ ng/mL	
Butalbital, S	---- $\geq 10$ $\mu$ g/mL	
Caffeine, S	---- $\geq 30$ $\mu$ g/mL	
Carbamazepine, Free, S	---- $\geq 4.0$ $\mu$ g/mL	
Cyanide, Blood	---- $\geq 2.0$ $\mu$ g/mL	
Desipramine, S	---- $\geq 300$ ng/mL	
Disopyramide, S	---- $\geq 7.0$ $\mu$ g/mL	
Doxepin and Nordoxepin, S	---- $\geq 300$ ng/mL	
Ethosuximide, S	---- $>150$ $\mu$ g/mL	
Ethylene Glycol, S	---- $\geq 20$ mg/mL	
Fibrinogen, P	$\leq 60$ mg/dL ----	
Imipramine/Desipramine, S	---- $\geq 300$ ng/mL	
INR	---- $\geq 5.0$	
Isopropanol (Volatile Screen) all specimen types	Any Value mg/dL Detected	
Lead 0-15 years	---- ----	---- $>20$ $\mu$ g/dL
$\geq 16$ years	---- $>70$ $\mu$ g/dL	
Lidocaine, S	---- $> 6.0$ $\mu$ g/mL	
Methanol (Volatile Screen) all specimen types	Any Value mg/dL Detected	
Nortriptyline, S	---- $\geq 300$ ng/mL	
Phenobarbital	---- $\geq 60$ $\mu$ g/mL	
Phenytoin, Free	---- $\geq 2.5$ $\mu$ g/mL	
Primidone, S	---- $\geq 15$ $\mu$ g/mL	
Procainamide, S	---- ----	
Procainamide	---- $> 12$ $\mu$ g/mL	
N-Acetylprocainamide	---- $\geq 40$ $\mu$ g/mL	
Quinidine	---- $\geq 6.0$ $\mu$ g/mL	
Valproic Acid Free and Total, S	---- ----	
Valproic Acid, Free	---- $> 30$ $\mu$ g/mL	
Valproic Acid, Total	---- $> 151$ $\mu$ g/mL	