

Preferred Lab Partners

Critical Values List

PLP.755.407.F1

June 2019: Tri Health dedicated Critical result Customer Support line 513-865-4669

May 19, 2020: Revised STE Acetaminophen, Carbamazepine, Phenobarbital, CK-MB Index and Removed Microbiology Coronavirus 2019

September 2020: Removed Custom Cancer Care Critical values for chemistry and PTT, INR, Blasts, and CSF WBCs for hematology

June 2021: Added *Legionella pneumophila* to Microbiology section

CHEMISTRY	TriHealth	STE
Acetaminophen	>40.0 mcg/mL	>50 mcg/mL
Alcohol	none	>300 mg/dL
Amikacin	Random: >30.00 mcg/mL Trough: >8.00 mcg/mL Peak: >30.00 mcg/mL	>35 µg/mL >10 µg/mL >35 µg/mL
Amylase	>300 U/L	none
Ammonia	none	>100 umol/L
Beta HCG	>250,000.0 mIU/mL	none
Bicarbonate (HCO ₃)	<12 mmol/L	none
Bilirubin, Total	< 1 month old: >17.0 mg/dL	<4 weeks age: ≥15 mg/dL
BUN	>100 mg/dL	none
Calcium	<6.0 mg/dL or >12.0 mg/dL	<6.0 mg/dl or >13.0 mg/dl
Calcium, Ionized	≥ 1 year old: <3.0 mg/dL or >6.4 mg/dL <1-year-old: <3.0 mg/dL or >6.0 mg/dL	All ages: <0.8 mmol/L or >1.55 mmol/L
Carbamazepine	>15.0 mcg/mL	>12 µg/mL
Carboxyhemoglobin	>20 %	>20 %
CK, Total	>5000 IU/L	none
CK-MB Index	>4.9 when CK-MB >6.0 ng/mL	Not performed at PLP
Creatinine	≥1-year-old: >3.0 mg/dL (only ED patients, OBGYN patients and all outpatients) <1-year-old: >2.0 mg/dL	none
Digoxin	>2.5 ng/mL	>2.1 ng/ml
Dilantin (Phenytoin)	>30.0 mcg/mL	>40 µg/mL

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Fetal Fibronectin	Positive	none
Gentamicin	Random: >12.0 mcg/mL Trough: >2.0 mcg/mL Peak: >12.0 mcg/mL	Random: none Trough: >2.5 mg/L Peak: none
Glucose	≥1 year old: <54 mg/dL or >400 mg/dL <1 year old: <40 mg/dL or >150 mg/dL	≥4 weeks: <50 mg/dl or >450 mg/dl <4 weeks: <40 mg/dl or >300 mg/dl
Lactate	>4.0 mmol/L	none
Lithium	>1.5 mmol/L	>2.0 mmol/L
Magnesium	≥1 year old: <1.0 or >6.0 mEq/L <1 year old: <1.0 or >4.0 mEq/L	≤1.0 mg/dl or >5.0 mg/dl
O ₂ Saturation	<80 %	none
pCO ₂	<20 mm Hg or >70 mm Hg	<20 mm Hg or >70 mm Hg
pH	<7.20 or >7.60 Arterial cord blood: <7.00	<7.20 or >7.60
Phenobarbital	>40.0 mcg/mL	>40 µg/mL
Phosphorus	≥1 year old: <1.0 mg/dl or >8.0 mg/dL <1 year old: <3.0 mg/dL	<1.0 mg/dl
pO ₂	<40 mm Hg	<42 mm Hg
Potassium	≥ 1 year old: <3.0 mEq/L or >6.0 mEq/L <1 year old: <2.5 mEq/L or >7.0 mEq/L	≥4 weeks: <3.0 mmol/L or >6.0 mmol/L <4 weeks: <3.0 mmol/L or >8.0 mmol/L
Salicylate	>30 mg/dL	>40 mg/dL
Sodium	<125 mEq/L or >160 mEq/L	<120 mmol/L or >160 mmol/L
Theophylline	>25.0 mcg/mL	>25.0 mcg/mL
Tobramycin	Random: >12.0 mcg/mL Trough: >2.0 mcg/mL Peak: >12.0 mcg/mL	none >2.5 mg/L none
Triglycerides	< 1 year old: >300 mg/dL	none
Troponin	>0.50 ng/mL	>100 ng/L
Uric Acid	>22.0 mg/dL	none
Valproic Acid	>140.0 mcg/mL	>150 µg/mL
Vancomycin	Random: >50.0 mcg/mL Trough: >20.0 mcg/mL	Peak/Random >60 µg/mL Trough ≥20 µg/mL
HEMATOLOGY	TriHealth	STE
White Blood Cells (CSF)	≥ 1 year old: >10 WBC/mcL (in the absence of RBC) Less than 1 year old: >25 WBC/mcL	

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Cell Count		
Factor VIII	<20%	
Factor IX	≥ 30 days: <20% < 30 days: <15%	
Fibrinogen	<100 mg/dL	<100 mg/dL
Hemoglobin	> 1 day old: <7.0 g/dL or >23.0 g/dL ≤ 1 day old: <13.0 g/dL or >23.0 g/dL	0 to 14 days: <10 g/dL or >23 g/dL 15 to 30 days: <10 g/dL or > 22 g/dL > 30 days < 7 g/dL or > 20 g/dL
Hematocrit	>1 day old: <18% or >69% ≤ 1 day old: <36% or >69%	>31 days: <21% or >60% 0-14 days: < 30% or >70% 15-30 days: < 30% or >65%
Heparin Induced Platelet Antibodies	Positive	None
Heparin Assay (anti-factor Xa)	None	≥1.0 IU/mL
Microorganism in peripheral blood or CSF	Any organism seen on a stained blood or CSF smear	Any organism seen on a stained blood or CSF smear
Platelets, Blood	≥1 year old: <20 x 10 ³ /mcL or >1000 x 10 ³ /mcL <1 year old: <75 x 10 ³ /mcL or >1000 x 10 ³ /mcL	< 40 x 10 ³ /µL or >1000 x 10 ³ /µL
INR (Protime)	≥1 year old: >5.0 <1 year old: >2.9	≥5.0
PTT (Partial Thromboplastin Time)	≥ 1 year old: >144.9 seconds <1 year old: >84.9 seconds	>125 seconds
Urine Ketones	Less than or equal to 12 years old: >Trace	none
White Blood Cell on Whole Blood	≥1 year old: <1.0 x 10 ³ /mcL or >50.0 x 10 ³ /mcL < 1 year old: <5.0 x 10 ³ /mcL or >35.0 x 10 ³ /mcL	<1.5 x 10 ³ /µL or >50 x 10 ³ /µL

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White Blood Cells, CSF	≥1 year old > 10 White Blood Cells < 1 year old > 25 White Blood Cells	
Neutrophil, Absolute	≥ 1 year old: <1.00 x 10 ³ /mcl < 1 year old: <1.00 x 10 ³ /mcl	≤0.5 x 10 ³ /μL
Immunology	TriHealth	STE
RPR Quants	Positive on newborn (≤ 30 days old)	

HEMATOLOGY – Cancer Care CUSTOM CRITICAL VALUES

Test Name	Age	Critical Low	Critical High
Hemoglobin	Adult	≤ 6 gms/dl	≥ 22.5 gms/dl
Platelets	Adult	≤ 15 x 10 ³ /μL	

MICROBIOLOGY

Test Name	Critical Value / Critical Result
Bacterial Culture	Positive growth from blood, brain and brain-associated specimens, CSF (Cerebral Spinal Fluid), heart and heart-associated specimens, sterile body fluid, corneal scrapings, aqueous or vitreous fluid, or a positive urine culture on newborn (NICU)
Cryptococcal Antigen	Positive result from blood or CSF
Fungal Culture	Positive result from blood, CSF, corneal scrapings, aqueous or vitreous fluid, or normal sterile body sites
Dimorphic fungus (Blasto, Coccidio, Histo, <i>P. marneffe</i> , etc.)	Positive culture growth
Zygomycetes (Mucor, Rhizopus, etc.)	Positive culture growth
Gram Stain	Positive result from CSF, sterile body fluid, corneal scraping, aqueous or vitreous fluid
Mycobacterial Culture or Smear	Positive result from any source
Parasites	Positive result from blood or stool
Streptococcus pneumoniae antigen	Positive result from CSF
Viral PCR (HSV and CMV)	Positive result from blood or CSF or newborn lesion (NICU, SCN, Nursery patients)
ME panel (Meningitis-Encephalitis panel)	Positive result from CSF

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Shiga toxin and/or Ecoli O157	Positive result or culture growth from stool
Rotavirus	Positive result from stool on newborn (NICU, SCN, Nursery)
Legionella pneumophila	Positive result