



Critical Values

The definition of a "critical value", according to the American Society of clinical Pathologists (ASCP) is "a pathological state at such variance with normal as to be immediately life-threatening unless something is done promptly and for which some corrective action must be taken." The laboratory is required by law to call critical values to the patient's caregiver and document the call.

Critical values for Dayton Children's Laboratory

Test	Critical Values		Significant Value	Critical Tests Frozen Sections
	Low	High		
Glucose	< 50 mg/dL	>900 mg/dL	350-900 mg/dL	All Corrected Results
Potassium	< 2.8 mEq/L	>6.5 mEq/L		
Sodium	< 125 mEq/L	>159 mEq/L	125-128 mEq	
Total CO ₂	< 12 mEq/L			
Bilirubin, Total		>25 mg/dL Unless previous value was critical	18-25 mg/dL Unless previous value was significant	
Calcium	<6.5 mg/dL	>13.0 mg/dL		
Creatinine		>5 mg/dL	>2.6 - 5 mg/dL	
BUN		>80 mg/dL	40-80 mg/dL	
Phosphorus	< 1.0 mg/dL	>8.0 mg/dL	1.0 - 1.5 mg/dL	
CK		≥4,000 U/L		
Troponin		>1.0 ng/mL		
Hemoglobin	< 5.0 gm/dL	>21.0 gm/dL (NICU: <5 gm/dL or >25 gm/dL)	5-7 gm/dL	
PTT		>75 sec		
INR		>4.0		
WBC	<0.200x10 ³ /mm ³ unless previous value was critical		0.200 - 2.0x10 ³ /mm ³ unless previous value was significant	
ANC	<500 unless previous value was critical			
Platelets	<10 x 10 ³ /mm ³	>1000 x 10 ³ /mm ³	10-50 x 10 ³ /mm ³	
Fibrinogen	<45 mg/dL		<100 mg/dL	
Blasts on Blood Smear			Present unless previous value was significant	
Phenobarital		>50 ug/mL		
Phenytoin		>30 ug/mL		
Salicylate		>30 ug/mL		
Theophylline		>20 ug/mL		
Digoxin		≥2.5 ng/mL		
Vancomycin		>25 ug/mL	20-25 ug/mL	
Blood culture		Positive		
CSF Gram Stains or Culture		Positive (call direct caregiver)		
Lead			>40 ug/mL	
Pregnancy Test			Positive	
PCR for Pertussis			Positive	
PCR for Enterovirus			Positive	
PCR for HSV			Positive	
Acid-Fast Bacilli			Positive	
Chlamydia trachomatis			Positive (<30 DO)	
Herpes Simplex virus			Positive (undiagnosed Pt.)	
HIV			Positive	
N. gonorrhoeae			Positive	
Stool Pathogens			Positive	
Malaria			Positive	