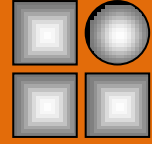


Test	Units	Lower Limit	Upper Limit	Comments
<b>Blood Gases</b>				
pH	-	7.2	7.6	Arterial , capillary
PCO2	mmHg	20	70	Arterial , capillary
PO2	mmHg	40	-	Arterial
PO2(children)	mmHg	45	125	Arterial
PO2(newborn)	mmHg	35	90	Arterial
<b>Chemistry</b>				
Albumin(children)	g/dl	1.7	6.8	Serum or plasma
Ammonia(children)	μmol/L	-	109	plasma
Bilirubin (newborn)	mg/dl	-	15	Serum or plasma
Calcium	mg/dl	6.0	13	Serum or plasma
Calcium (children)	mg/dl	6.5	12.7	Serum or plasma
Calcium, ionized	mmol/L	0.75	1.6	plasma
Carbon dioxide,total	mmol/L	10	40	Serum or plasma
Chloride	mmol/L	80	120	Serum or plasma
Creatinine	mg/dl	-	5.0	Serum or plasma
Creatinine(children)	mg/dl	-	3.8	Serum or plasma
Glucose	mg/dl	40	450	Serum or plasma
Glucose (children)	mg/dl	46	445	Serum or plasma
Glucose (newborn)	mg/dl	30	325	Serum or plasma
Glucose, CSF	mg/dl	40	200	CSF
Glucose, CSF(children)	mg/dl	31	-	CSF
Lactate	mmol/L	-	3.4	plasma
Lactate (children)	mmol/L	-	4.1	plasma
Magnesium	mg/dl	1.0	4.7	Serum or plasma
Osmolality	mOsm/kg	250	325	Serum or plasma
Phosphorus	mg/dl	1.0	8.9	Serum or plasma
Potassium	mmol/L	2.8	6.2	Serum or plasma
Potassium (newborn)	mmol/L	2.8	7.8	Serum or plasma
Protein (children)	g/dl	3.4	9.5	Serum or plasma
Protein, CSF (children)	mg/dl	-	188	CSF
Sodium	mmol/L	120	160	Serum or plasma
Urea nitrogen	mg/dl	-	80	Serum or plasma
Urea nitrogen (children)	mg/dl	-	55	Serum or plasma
Uric acid	mg/dl	-	13	Serum or plasma
Uric acid (children)	mg/dl	-	12	Serum or plasma
<b>Hematology</b>				
Hematocrit (adult)	%	20	60	First report only
Hematocrit (newborn)	%	33	71	
Hemoglobin (adult)	g/dl	7	20	First report only
Hemoglobin (newborn)	g/dl	10	22	
WBC (adult)	× 10 <sup>3</sup> /μL	2.0	30	First report only



## critical values

## مقادیر بحرانی

Test	Units	Lower Limit	Upper Limit	Comments
WBC (children)	$\times 10^3/\mu\text{L}$	2.0	43	
Platelets	$\times 10^3/\mu\text{L}$	40	1000	
Blasts	Any seen(first report only)			
Drepanocytes	Presence of sickle cells or aplastic crisis			
<b>Coagulation</b>				
Fibrinogen	mg/dl	100	800	
Prothrombin time	s	-	30	
Partial thrombo plastin time	s	-	78	
<b>Urinalysis</b>				
Microscopic	Presence of pathologicalall crystals(urate,cysteine,leucine,or tyrosine)			
Chemical	Strongly positive glucose and ketones			
<b>Cerebrospinal fluid</b>				
WBC (0-1yr)	Cells per $\mu\text{L}$	-	>30	
WBC (1-4yr)	Cells per $\mu\text{L}$	-	>20	
WBC (5-17yr)	Cells per $\mu\text{L}$	-	>10	
WBC (>17yr)	Cells per $\mu\text{L}$	-	>5	
Malignant cell, blast, or microorganisms	Any	Applies to other sterile body fluids		

Reference : Tietz textbook of clinical chemistry and molecular diagnostics, , Table 56-3 Critical Value , Fourth Edition , 2006