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Title: LAB - QSE 07 - Critical Values Chart

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Critical Laboratory Values

Section	Analyte	Critical Low	Critical High	Units	Age Range
Blood Gas	O2Hb	<85		%	All
Blood Gas	%COHb (Carboxyhemoglobin)		>15	%	All
Blood Gas	O2 Saturation	<85		%	All
Blood Gas	pCO2	<20	>60	mm Hg	All
Blood Gas	pH (arterial)	<7.25	>7.55	pH	All
Blood Gas	pO2	<55		mm Hg	All
Blood Gas	pH (venous)	<7.22	>7.52	Units	All
Chemistry	Bilirubin, Total	See Total Bilirubin Chart		mg/dL	0-6 days
Chemistry	Bilirubin, Total		≥17	mg/dL	6-28 days
Chemistry	Calcium	<6.5	>13.0	mg/dL	All
Chemistry	Calcium, ionized	<0.80	>1.58	mmol/L	All
Chemistry	CO2	<10	>45	mmol/L	All
Chemistry	Glucose	<40	>200	mg/dL	0-1 month
Chemistry	Glucose	<50	>500	mg/dL	> 1 month
Chemistry	Glucose, whole blood	<40	>200	mg/dL	0-1 month
Chemistry	Glucose, whole blood	<50	>500	mg/dL	>1 month
Chemistry	Lactic Acid		>4.0	mmol/L	All
Chemistry	Magnesium	<1	>5	mg/dL	All
Chemistry	Phosphorus	<1.0		mg/dL	All
Chemistry	Potassium	<2.8	>6.2	mmol/L	All
Chemistry	Potassium, whole blood	<2.8	>6.2	mmol/L	All
Chemistry	Sodium	≤120	>158	mmol/L	All
Chemistry	HS-Troponin***		≥100	ng/L	All

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Coagulation	Anti-factor Xa (LMWH)		>2.0	IU/mL	All
Coagulation	Fibrinogen	<80		mg/dL	All
Coagulation	PT (INR)		≥5.0		All
Coagulation	PTT		>130	seconds	All
Hematology	Blasts		Present		All
Hematology	Platelet Count	<100	>800	K/mcL	0-1 month
Hematology	Platelet Count	<20	>800	K/mcL	> 1 month
Hematology	ABS neut. Ct	<0.5		K/mcL	All
Hematology	Blood Parasite (i.e. Babesia, Malaria, etc.)		Present		All
Hematology	Hematocrit	<24	>69	%	0-1 month
Hematology	Hematocrit	<21	>69	%	> 1 month
Hematology	Hemoglobin	<7.0	>21.6	g/dL	0-1 month
Hematology	Hemoglobin	<7.0	>19.9	g/dL	> 1 month
Hematology	WBC	<1.0	>50.0	K/mcL	All
Microbiology	AFB Culture		Positive	n/a	All
Microbiology	AFB Smear		Positive	n/a	All
Microbiology	Blood Culture		Positive	n/a	All
Microbiology	CSF Culture		Positive	n/a	All
Microbiology	CSF Gram Stain		Positive	n/a	All
Microbiology	CSF Meningitis Panel		Positive	n/a	All
Microbiology	Rapid HIV		Positive	n/a	All
Microbiology	Sterile BF Culture		Positive	n/a	All
Microbiology	Sterile BF Gram Stain		Positive	n/a	All
Microbiology	Transfusion Reaction Culture		Positive	n/a	All
Microbiology	Transfusion Reaction Stain		Positive	n/a	All
Drugs	Acetaminophen		>150	mcg/mL	All
Drugs	Carbamazepine		>15	mcg/mL	All
Drugs	Digoxin		>2.0	ng/mL	All
Drugs	Gentamycin Peak		>12	mcg/mL	All
Drugs	Gentamycin Trough		>2.5	mcg/mL	All
Drugs	Lithium		>1.2	mmol/L	All
Drugs	Phenobarbital		>50	mcg/mL	All
Drugs	Phenytoin (Dilantin)		>30.0	mcg/mL	All
Drugs	Salicylate		>40	mg/dL	All
Drugs	Theophylline		>20	mcg/mL	All

Drugs	Tobramycin Peak		>12	mcg/mL	All
Drugs	Tobramycin Trough		>2.0	mcg/mL	All
Drugs	Valproic Acid		>200.0	mcg/mL	All
Drugs	Vancomycin Trough		>20	mcg/mL	All

Special Criteria: Massive Transfusion Protocol Patients

Result	Low Critical	High Critical	Units	Action
Platelet	< 50	>800	K/mcL	Platelet transfusion
Fibrinogen	< 120		mg/dL	Cryo transfusion
Ionized Calcium	< 1.00	>1.58	mmol/L	Calcium dose
pH, Venous	< 7.25	>7.52	units	Bicarbonate dose

***High Sensitivity Troponin values ≥ 100 ng/L are only called once during a 24-hour period. Any subsequent values ≥ 100 ng/L during that 24-hour period will **NOT** be called.

Total Bilirubin – Critical Levels:

Age in Hours	Bili (mg/dL)		Hours	Bili (mg/dL)		Hours	Bili (mg/dL)	
0	5	5.6	38	39	11.0	72	73	14.7
5	6	5.8	39	40	11.2	73	74	14.8
6	7	6.0	40	41	11.3	74	75	14.8
7	8	6.2	41	42	11.4	75	76	14.9
8	9	6.4	42	43	11.5	76	77	15.0
9	10	6.5	43	44	11.7	77	78	15.1
10	11	6.7	44	45	11.8	78	79	15.1
11	12	6.9	45	46	11.9	79	80	15.2
12	13	7.1	46	47	12.0	80	82	15.3
13	14	7.2	47	48	12.2	82	83	15.4
14	15	7.4	48	49	12.3	83	84	15.5
15	16	7.6	49	50	12.4	84	85	15.5
16	17	7.7	50	51	12.5	85	86	15.6
17	18	7.9	51	52	12.6	86	88	15.7
18	19	8.1	52	53	12.7	88	90	15.8
19	20	8.2	53	54	12.8	90	92	15.9
20	21	8.4	54	55	13.0	92	93	16.0
21	22	8.6	55	56	13.1	93	96	16.1
22	23	8.7	56	57	13.2	96	97	16.2
23	24	8.9	57	58	13.3	97	102	16.2
24	25	9.0	58	59	13.4	102	108	16.2
25	26	9.2	59	60	13.5	108	114	16.2
26	27	9.3	60	61	13.6	114	115	16.2
27	28	9.5	61	62	13.7	115	120	16.3
28	29	9.6	62	63	13.8	120	126	16.3
29	30	9.8	63	64	13.9	126	134	16.3
30	31	9.9	64	65	14.0	134	138	16.4
31	32	10.1	65	66	14.1	138	144	16.4
32	33	10.2	66	67	14.2			
33	34	10.3	67	68	14.2			
34	35	10.5	68	69	14.3			
35	36	10.6	69	70	14.4			
36	37	10.8	70	71	14.5			
37	38	10.9	71	72	14.6			