



Reference Ranges Guide
for Client Facilities - **March 2021**

Normal And Panic Ranges

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For the most recent reference ranges guide, check:
www.aculabs.com/support-home/test-directory-forms/

JANUARY 2019 - PRESENT CHANGE LOG:

January 24, 2019:

Prothrombin Time reference range changed from "9.4-12.5 sec" to "10.4-12.6 sec".
INR reference range changed from "0.8-1.2" to "0.9-1.1".

April 24, 2019:

ABS. Neut reference range changed from "1.6-8.3 K/cumm" to "1.6-6.1 K/cumm".
ABS. Lympho reference range changed from "1.4-2.9 K/cumm" to "1.2-3.7 K/cumm".
% Neutophils reference range changed from "55.0%-70.0%" to "34.0%-71.0%".
% Lymphocytes reference range changed from "20.0%-40.0%" to "19.3%-51.7%".
% Monocytes reference range changed from "0.0%-10.0%" to "4.7%-12.5%".
% Eosinophils reference range changed from "0.0%-5.0%" to "0.0%-7.0%".
% Basophils reference range changed from "0.0%-2.0%" to "0.0%-1.2%".
MCV reference range changed from "81-99 fL" to "81-100 fL".
MCH referange range changed from "27-31 pg" to "25-32 pg".
RDW reference range changed from "12.1-15.2%" to "11.6-14.4%".
MPv reference range changed from "7.4-10.4 fL" to "9.4-12.4 fL".
Fibrinogen (#955) removed.

May 24, 2019:

Troponin 1 reference range changed from "<0.3 ng/ml" to "<0.06 ng/ml".
Troponin 1 panic range changed from ">0.3" to ">0.1".

November 20, 2019:

Chlorides (CL) panic range changed from "<90 and >115" to "<80 and >125".
PH reference range changed from "5.0-9.0" to "5.0-8.0."

September 22, 2020:

Magnesium panic range changed from ">5.0" to "<1.0 and >5.0".
Phosphorus panic range changed to "<1.0 and >9.0".
Platelets panic range changed from "<75 and >800" to "<40 and >800".
Prothrombin Time reference range changed from "10.4-12.6 sec" to "10.9-12.5 sec".
INR reference range changed from "0.9-1.1" to "0.8-1.1".
Homocysteine (#3334) removed.
SARS-CoV-2 added.
Immature Granulocytes (#210) added.
D-Dimer HS 500 (#619) added.
Group A strep from a wound or body fluid added.

November 5, 2020:

Direct Bilirubin panic range changed from ">5.0" to ">3.0".
Troponin I reference range changed from "<0.06 ng/mL" to "<45 ng/L".
Troponin I panic range changed from ">0.1" to ">100".
Immature Retic Fraction (#624) added.
RET-He (#296) added.

March 1, 2021:

Immature Platelets Fraction (#622) added.

Analyte	Test Code	Analyte	Reference range	Panic range
TDM:	329	Carbamazepine (Tegretol)	4.0 -12 ug/mL	>12.0
	789	Depak (Valproic Acid)	50 - 100 ug/mL	>100.0
	300	Digoxin	0.6 - 1.2 ng/mL	>2.0
	771	Gentamicin Peak	5.0 - 10.0 ug/mL	>10.0
	786	Gentamicin Trough	0.5 - 2.0 ug/mL	>4.0
	350	Keppra (Levetiracetam)	6.0 - 46 ug/mL	>50.0
	129	Lithuim	0.6 - 1.2 mmol/L	>1.5
	320	Phenobarbital	10.0 - 40 ug/mL	>45.0
	301	Phenytoin (Dilantin)	10.0 - 20.0 ug/mL	>25.0
	321	Theophylline	10.0 - 20.0 ug/mL	>25
	764	Tobramycin Peak	6.0 - 10.0 ug/mL	>10.0
	763	Tobramycin Trough	0.5 - 2.0 ug/mL	>4.0
	893	Vancomycin Peak	20.0 - 40.0 ug/mL	>40.0
	894	Vancomycin Trough	10.0 - 20.0 ug/mL	>25.0
Thyroid function	303	T3 Uptake	28 % - 41 %	
	3224	Total T3	80-200 ng/dL	
	304	Thyroxin (T4)	4.5 - 11.7 ug/dL	
	327	Thyroid Stimulating Hormone (TSH)	0.3 - 4.2 uIU/mL	
	703	Free T3	2.0 - 4.4 pg/mL	
	704	Free T4	0.9 - 1.7 ng/dL	
Parathyroid Hormone	712	Parathyroid Hormone Intact (PTH I)	15-65 pg/mL	
Lipid:	105	Cholesterol	< 200 mg/dL	
	193	Triglycerides	<150 mg/dL	
	192	HDL	>40 mg/dL	
Tumor Markers:	3109	AFP	<8.3 ng/mL	>15
	328	Prostate Specific Antigen (PSA)	<4.0 ng/mL	>12.0
	332	Carcinembrionic Antigen (CEA)	Nonsmoker <3.8 ng/mL Smoker <5.5 ng/mL	>75
	680	Cancer Antigen 125 (CA 125)	<38.1 U/mL	
Anemia:	347	B12	232-1245 pg/mL	
	348	Folate (Folic Acid)	>4 ng/mL	
	324	Ferritin	M 30 - 400 ng/mL F 10 - 200 ng/mL	
Chemistry:	107	Albumin	3.5 - 5.2 g/dL	
	109	Alkaline Phosphatase (ALP)	35-129 U/L	>500
	120	ALT (SGPT)	<40 U/L	
	139	Ammonia	11-60 umol/L	>150
	143	Amylase	28 - 100 U/L	>200
	111	AST (SGOT)	<40 U/L	>100
	7533	BNP	<100 pg/mL	>300
	100	Calcium	8.4 - 10.2 mg/dL	< 6.5 and >14.0
	118	Chlorides (Cl)	98 - 107 mmol/L	< 80 and >125
	138	CK	M 39 - 308 U/L F 26 - 192 U/L	>400
	145	CK-MB	< 5.0 ng/mL	>25
	167	CO2	22 - 32 mmol/L	< 15 and >40
	3128	Cortisol AM	5-20 µg/dL	
	770	Cortisol PM	2.5-12 µg/dL	
	509	C-Reactive Protein (hs-CRP)	<1.0 mg/L	
	507	C-Reactive Protein (Inflammatory)	<8.0 mg/L	
	101	Creatinine	0.6 - 1.5 mg/dL	>5.0
	136	Direct Bilirubin	<0.3 mg/dL	>3.0
	121	GGT (GGPT)	M 8 - 61 U/L F 5 - 36 U/L	>700
	102	Glucose	65 - 99 mg/dL	<40 and >350
	157	Glucose Post prand	140 - 200 mg/dL	>450
	124	Glyco	<5.7%	
	125	Iron (Fe)	M 59 - 158 ug/dL F 37 - 145 ug/dL	
	110	LDH	135 - 225 U/L	>500
	346	LIPASE	13 - 60 U/L	
	142	Magnesium	1.6 - 2.6 mg/dL	<1.0 and >5.0
	144	Phosphorus	2.5 - 4.5 mg/dL	<1.0 and >9.0
	117	Potassium (K)	3.5 - 5.3 mmol/L	< 2.8 and >5.8
	4847	PreAlbumin	20 - 40 mg/dL	
	3444	ProBNP	<125 pg/mL for <75Y <450 pg/mL for >75Y	>450 for <75Y >900 for >75Y
	369	Procalcitonin	<0.05 ng/mL	>0.5
	3206	Prolactin	M 4.0 - 15.2 ng/mL F 4.8 - 23.3 ng/mL	
	116	Sodium (Na)	135 - 145 mmol/L	< 125 and >155
	3244	Testosterone	M 193 - 827 ng/dL F < 48 ng/dL	
	108	Total Bilirubin	<1.2 mg/dL	>10.0
	106	Total Protein (TP)	6.4 - 8.3 g/dL	
	963	Troponin I	<45 ng/L	>100
	126	UIBC (Unsaturated Binding Cap.)	112 - 347 ug/dL	
	103	Urea Nitrogen (BUN)	8 - 23 mg/dL	>80.0
	104	Uric Acid	M 3.5 - 8.4 mg/dL F 2.2 - 7.3 mg/dL	

Analyte	Test Code	Analyte	Reference range	Panic range
	3521	Vitamin D	>30 ng/mL	
Hematology	200	White Blood Cells	3.5-11.0 K/cumm	<2.5 and >25.0
	222	ABS. Neut	1.6-6.1 K/cumm	
	223	ABS. Lympho	1.2-3.7 K/cumm	
	209	% Neutophils	34.0 % - 71.1 %	
	211	% Lymphocytes	19.3 % - 51.7 %	
	212	% Monocytes	4.7 % - 12.5 %	
	673	% Eosinophils	0.0 % - 7.0 %	
	672	% Basophils	0.0 % - 1.2 %	
	210	Immature Granulocytes	0.0 % - 0.4 %	
	201	RBC	M 3.6 - 5.6 M/cu.mm F 3.3 - 4.9 M/cu.mm	<2.0 and >7.5
	203	Hematocrit	M 36 - 51 % F 32 - 46 %	<25.0% and >55%
	202	Hemoglobin	M 12.1 - 17.1 g/dL F 10.7 - 15.1 g/dL	<8.0 and >18.0
	204	MCV	81 - 100 fL	
	205	MCH	25 - 32 pg	
	206	MCHC	31 - 36 g/dL	
	207	RDW	11.6 - 14.4 Percent	
	208	Platelets	126 - 400 K/cumm	<40 and >800
	213	MPV	9.4 - 12.4 fL	
	622	Immature Platelets Fraction	1.2%-8.7%	
	219	Retic Count	0.2 - 2.5 Percent	
	624	Immature Retic Fraction	M 2.3 - 13.4 % F 3.0 - 15.9 %	
	296	RET-He	28.2 - 36.6	
	600	Sedimentation Rate	M: <15 mm/h for <50Y <20 mm/h for >50Y F: <20 mm/h for <50Y <30 mm/h for >50Y	
619	D-Dimer HS 500	<500 ng/mL FEU		
601	Prothrombin Time	10.9-12.5 sec	< 9.0 and >99.9	
608	INR	0.8 - 1.1	<0.8 and >4.0	
604	PTT	25.1 - 36.5 sec	<18 sec and >55	
Urine	4001	Color	Yellow	
	4002	Clarity	Clear	
	400	Glucose	Negative	
	401	Bilirubin	Negative	
	402	Ketone	Negative	
	403	Spec. Gravity	<1.030	
	404	Blood	Negative	
	405	PH	5.0-8.0	
	406	Protein	Negative	
	408	Nitrites	Negative	
	409	Leukocyte	Negative	
	168	Sodium, Urine/Random	No ref. range est.	
	430	Sodium, Urine/24 HR	40-220 mmol/24 hr	
	170	Chloride, Urine/Random	No ref. range est.	
	428	Chloride, Urine/24 HR	110-250 mmol/24 hr	
	169	Potassium, Urine/Random	No ref. range est.	
	427	Potassium, Urine/24 HR	25-125 mmol/24hr	
	423	Creatinine, Urine/Random	No ref. range est.	
	424	Creatinine, Urine/24 HR	M 1.0 - 2.3 g/24hr F 0.4- 1.6 g/24hr	
	420	Urine volume/24 HR	800-2000 mL/24hr	
	450	Creatinine Clearance	71-151 mL/min	
	425	Total Protein, Urine/24 HR	<150 mg/24hr	
	406Q	Total Protein, Urine/Random	No ref. range est.	
4555	Microalbumin, Urine/24 HR	<30 mg/24hr		
6517	Microalbumin, Urine/Random	No ref. range est.		
Drug Screen		Amphetamine	Negative	
		Barbiturates	Negative	
		Benzodiazpines	Negative	
		Cannabinoids (THC)	Negative	
		Cocaine netabolites	Negative	
		ETOH	Negative	
		Opiate	Negative	
	Phencyclidine (PCP)	Negative		
Microbiology		Microorganism in the blood	Negative	Positive
		Clinical Significant microorganism from a sterile body site	Negative	Positive
		Group A strep from a wound or body fluid	Negative	Positive
		Initial stool isolates of Salmonella, Shegella & Campylobacter, Clostridium Difficile	Negative	Positive
		Other microbiology cititca values: Methicillin Resistant Staphylococcus Aureus (MRSA), Vancomycin Resistant Enterococcus (VRE), Multi-drug Resistant organism (MDR) Extended-Spectrum Beta Lactamse (ESBL), Influenza A/B, and SARS-CoV-2	Negative	Positive

NOTE: The reference ranges provided above were last updated on: **March 1, 2021**
Facilities should visit www.aculabs.com to check for most recent reference ranges if above is out-dated.
Clients are encouraged to check for new reference ranges every quarter.