



Normal values of all blood components

The International System of Units, known by the international abbreviation in all languages, and it has term = SI.

References values

Test	Male	Female	Unite
Total WBC	4.0-11.0		$\times 10^9 / L$
Lymphocyte	1.0 - 3.0		$\times 10^9 / L$
Monocyte	0.2 - 1.0		$\times 10^9 / L$
Basophile	0.02 – 0.1		$\times 10^9 / L$
Neutrophil	2.0 – 7.0		$\times 10^9 / L$
Eosinophil	0.02 – 0.5		$\times 10^9 / L$
Packed cell volume (pcv) hematocrite	0.40 – 0.54	0.37 – 0.47	%
Platelates count	150000- 240000		Per mm ³
Rbc count	4.5 - 6.5	3.8 - 5.8	$\times 10^{12} / L$
Reticulocyte (adult)	25 – 85		$\times 10^9 / L$
Hemoglobin	13 – 18	11.5 – 16.5	g/dL
Transferrin	0.2 – 0.4		g/dL
Haptoglobin	0.02 – 0.24		g/dL
B12	241 - 900		ng/L
Folate	5 – 20		ng/L
Ferritin	20 -300	14 -150	ng/mL
Iron	56 – 178		µg/dL
Mean corpuscular volume (mcv)	78 – 98		fL
Mean corpuscular hemoglobin (mch)	27 – 32		Pg
Mean corpuscular hemoglobin concentration (mchc)	32 – 36		gm/dL
Red distribution width (rdw)	10 – 15		%
Blood volume	75 ± 10	70 ± 10	ml/kg
Erythrocyte sedimentation rate (ESR)	0 – 10	3 - 15	mm/hr
Bleeding time	< 8		minutes
Prothrombin time	10.5 – 13.5		Second
Partial thromboplastin time	26 - 36		Second



Units abbreviations

dl = deciliters	min = minutes
fg = femtogram	mlu = milli international units
fl = femtoliter	ml = milliliters
g = grams	mm ³ = cubic milliliters
hr = hour	mmol = millimoles
IU = international units	mOsm = milliosmoles
kg = kilograms	Neg = negative
l = liters	ng = nanograms
mcl = micro international units	nm/mg Pr = nonomoles 1/2 cystine/milligram protein
mceq = microequivalents	pg = picograms
mcu = micro units	pos = positive
mcg = micrograms	sec = seconds
mcl = microliters	TAT = turn around time
mcmol = micromoles	u = units
mEq = milliequivalents	ug/gcr = ug per gram of creatinine
mg = milligrams	

1 Milli liter (mL) 10 ⁻³ L	0.001
1 Micro liter (μL) 10 ⁻⁶ L	0.00001
1 Nano liter (nL) 10 ⁻⁹ L	0.00000001
1 Pico liter (PL) 10 ⁻¹² L	0.00000000001
1 femtoliter (FL) 10 ⁻¹⁵ L	0.0000000000001

References:

- 1- Adapted from Centers for Disease Control and Prevention *Laboratory Procedure Manual* http://www.cdc.gov/nchs/data/nhanes/nhanes_05_06/cbc_d_met.pdf Rev. 11-2010.
- 2- Walsh, M., & Wener, M. (2006). Laboratory procedure manual. *Natl Health Nutr Exam Survey*.