

Reference Range

Attachment C

Cerebrospinal Fluid Reference Range:

The inability to collect cerebrospinal fluid specimens in the normal, non-diseased population limits the ability to determine reference ranges. Literature suggests the following normal reference ranges.

RBC: Newborn preterm 0-1000/uL Newborn term 0-800/uL Neonate 0-50/uL >3 Months 0-5/uL Adult 0-5/uL WBC: 0-1 months 0-27/uL 2 months-16 years 0-7/uL Adults 0-5/uL (Adopted from CLSI, H56-A, VOL.25, N0. 20 guidelines)	Differentials: <table><tr><th>Cells</th><th>Neonate</th><th>Adult</th></tr><tr><td>Neutrophils</td><td>0-8%</td><td>0-6%</td></tr><tr><td>Lymphocytes</td><td>5-35%</td><td>40-80%</td></tr><tr><td>Monocytes</td><td>50-90%</td><td>15-45%</td></tr></table> (Adopted from CAP, Color Atlas of Body Fluids 2006)	Cells	Neonate	Adult	Neutrophils	0-8%	0-6%	Lymphocytes	5-35%	40-80%	Monocytes	50-90%	15-45%
Cells	Neonate	Adult											
Neutrophils	0-8%	0-6%											
Lymphocytes	5-35%	40-80%											
Monocytes	50-90%	15-45%											

Interpretations:

Reportable body fluid results may exceed commonly accepted normal reference ranges for all body fluids, so results should always be interpreted in light of the total clinical presentation of the patient, including clinical history, data from additional tests, and other appropriate information.

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Serous Fluids Reference Ranges:

The accumulation of fluid in a serous cavity is an indication of a disease state. The normal, on-diseased population has no fluid accumulation. Therefore, there are no normal reference ranges for serous fluids. However, the number of cells present in a serous fluid is used to aid in the classification, diagnosis and treatment of disease.

Synovial Fluid Reference Ranges:

The inability to collect synovial fluid specimens in the normal, non-diseased population limits the ability to determine reference ranges. Literature suggests the following normal reference ranges.

Other Body Fluid Values:

	Pleural	Peritoneal	Synovial
Color			Colorless/pale or yellow
Clarity			Transparent
Viscosity			Very high
Nucleated Count	1395-3734/uL	0-84/uL	13-180/uL
RBC		0-72/uL	0-2000/uL
Neutrophils	0-1%	2-34%	0-25%
Lymphocytes	18-36%	0-50%	0-78%
Macrophage	64-80%	9-61%	0-71%
Eos		0-14%	
Baso		1-5%	
Mesothelial	0-2%		
Synoviocytes			0-12%
Histocytes			0-26%
Volume	4.1-12.7 mL		
(Adopted from CLSI, H56-A, VOL.25, N0. 20 guidelines)			

Interpretations:

Reportable body fluid results may exceed commonly accepted normal reference ranges for all body fluids, so results should always be interpreted in light of the total clinical presentation of the patient, including clinical history, data from additional tests, and other appropriate information.