

Hematology Parameters in Whole Blood- The Coulter Counter Model S-PLUS JR with Coulter histogram differential, hereafter referred to as the Model S-PLUS JR, is a quantitative, automated hematology analyzer. It is intended for determining the following 16 hematologic parameters:

- ❖ White Blood Cell (WBC) or leukocyte count  $\times 10^3$
- ❖ Lymphocyte percent (LYMPH percent), %
- ❖ Mononuclear cell percent (MONO percent), %
- ❖ Granulocyte percent (GRAN percent), %
- ❖ Lymphocyte number (LYMPH #)  $\times 10^3$
- ❖ Mononuclear cell number (MONO #)  $\times 10^3$
- ❖ Granulocyte number (GRAN #)  $\times 10^3$
- ❖ Red Blood Cell (RBC) or erythrocyte count  $\times 10^6$
- ❖ Hemoglobin (Hb) concentration, g/dL
- ❖ Hematocrit (relative volume of erythrocytes) (Hct), %
- ❖ Mean Corpuscular (erythrocyte) Volume (MCV), fL
- ❖ Mean Corpuscular (erythrocyte) Hemoglobin (MCH), pg
- ❖ Mean Corpuscular (erythrocyte) Hemoglobin Concentration (MCHC), g/dL
- ❖ Red Cell (erythrocyte volume) Distribution Width (RDW), %
- ❖ Platelet (PLT) or thrombocyte count  $\times 10^3$
- ❖ Platelet distribution width (PDW)
- ❖ Relative volume of thrombocytes (PCT)
- ❖ Mean Platelet (thrombocyte) Volume (MPV), fL

The Coulter method of cell counting and sizing is based on the detection and measurement of changes in electrical resistance produced by a particle suspended in a conductive liquid traversing a small aperture. When cells are suspended in the conductive diluent, they function as discrete insulators. When a dilute suspension of cells is drawn through a small cylindrical aperture, the passage of each individual cell momentarily increases the resistance of the electrical path between two submerged electrodes, one located on each side of the aperture. An electrical pulse, suitable for counting and sizing, results from the passage of each cell through the aperture.

-from *Laboratory Procedures Used for the Third National Health and Nutrition Examination Survey (NHANES III) 1988-1994*  
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