Parameters That Expand Your Insights.

Research Use Only (RUO) Options For COULTER® LH Series Hematology Systems

The advanced technologies of the COULTER® LH hematology series deliver uncompromising performance with a full complement of automated capabilities. What's more, the LH series can extend your lab's capabilities even further with a broad spectrum of parameters for studying WBC differentials, platelets and a variety of red cell abnormalities.

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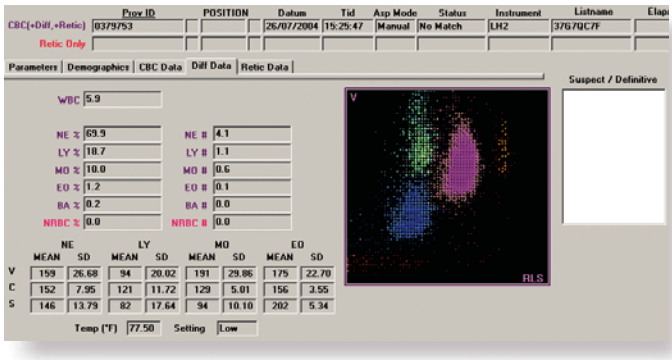
Bulletin 9618

White Blood Cell Differentials (WBC)

*WBC Research Population Data (RPD)**

Research population data (RPD) provides information about the four primary types of white cells. This allows you to detect cell alteration in various disease states faster and more accurately. RPD is displayed as part of the Diff Data and Retic Data tabs. For each of the four main WBC and Retic populations, (neutrophils, lymphocytes, monocytes and eosinophils), six values are displayed, which are the coordinates of cells in three-dimensional space.

A variety of studies have been published regarding RPD values and cellular state, especially for WBC, including Lymphocytes, Granulocytes and RBC



parasitic infestations. These studies show that when the VCS 3D Dataplot is optimized, a change in the WBC RPD appears to correlate with the presence of abnormal cells.

WBC RPD information lets you to turn pictures of cell populations into numbers. The LH series' unlimited, on-board user-defined decision rules allow you to create rules that can be used as part of your decision criteria for smear review.

Red Blood Cell Parameters (RBC)

COULTER® LH systems provide a broad RBC menu that addresses both red cells and reticulocytes.

Red Cell Size Factor (RSF)†*

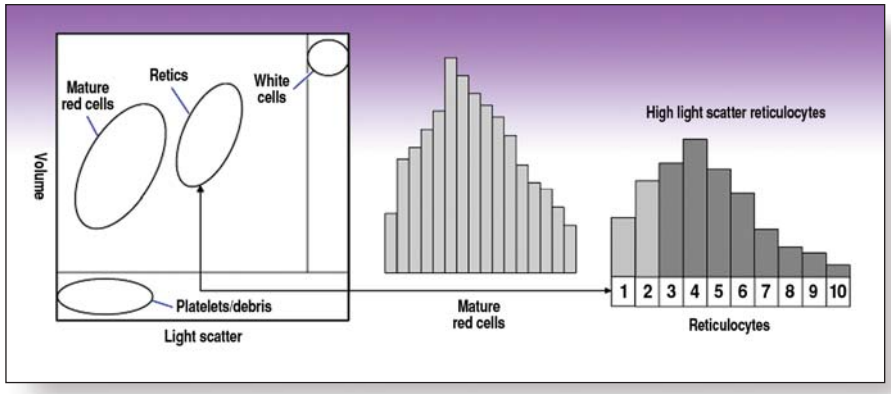
Red cell size factor (RSF) is a unique parameter only available on the COULTER® LH 780 system. It characterizes red cell size across the entire age continuum of the circulating red blood cells, which in turn, may be associated with changes in response to therapy.

Microcytic Anemia Factor (MAF)†*

Microcytic anemia factor (MAF) is a valuable research parameter for examining abnormal red cell modalities, since its calculation accounts for both cell size and hemoglobin content. This parameter may aid in the classification of anemias characterized by microcytic red blood cells.

Several studies have been conducted in Europe involving RSF and MAF. In a study of dialysis patients with a Transferrin Saturation of less than 20%, RSF and MAF may show good prediction of EPO response when the hemoglobin increased at least 1 g/dL. In another study, latent iron deficiency in fertile women was evaluated. This study showed that discriminant

functions with existing and new parameters could identify women with Latent Iron Deficiency, Latent Functional Iron Deficiency and also suggested hemachromatosis in this population.

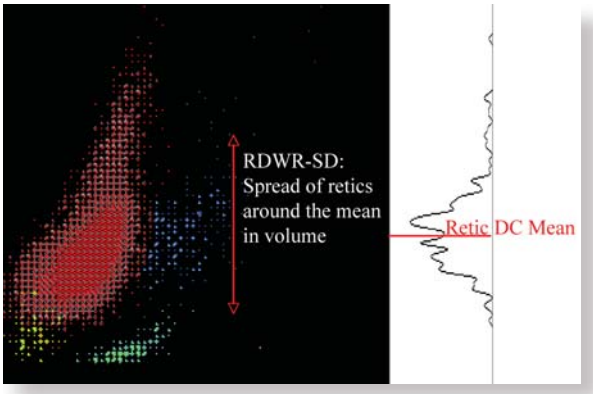


Mean Sphered Cell Volume (MSCV)

MSCV is the mean volume of red cell population of reticulocyte analysis. When performing a reticulocyte analysis, the clearing solution causes a sphering effect within the mature red cells. While MSCV is expected to be larger than MCV, in some patients the reverse is true. This may be useful as a screening tool for some abnormal RBC conditions.

*Reticulocyte Distribution Width By Standard Deviation (RDWR-SD)**
*Reticulocyte Distribution Width By Coefficient Of Variation (RDWR-CV)**

RDWR-SD is the standard deviation of the retic volume multiplied by the volume factor. RDWR-CV is the ratio of RDWR-SD and the retic volume mean multiplied by 100. Both RDWR-SD and RDWR-CV are derived from the reticulocyte histogram. RDWR is an indication of the size dispersion within the reticulocyte population.



High Light Scatter Retic % (HLR%)
High Light Scatter Retic # (HLR#)

The HLR parameters are used in the Immature Reticulocyte Fraction Calculation, or IRF. IRF is a calculated ratio using the count of the highest light scatter retics to the total count. The higher the light scatter, the more immature the retics are.

Platelets

Platelet Distribution Width (PDW)
Plateletcrit (PCT)

The LH series also offers two platelet research parameters. PDW is the coefficient of variation of platelet size, which is derived from the platelet histogram. PCT is a computed value that represents the platelet packed cell volume.

*For Research Use Only. Not for use in diagnostic procedures. †Patent Pending

Research Use Only Parameters On COULTER® LH Series Hematology Systems

	COULTER® LH 780 Systems	COULTER® LH 750 Systems	COULTER® LH 500 Systems
WBC RPD	✔	✔	✔
RSF	✔		
MAF	✔		
MSCV	✔	✔	
RDWR-SD	✔		
RDWR-CV	✔		
HLR%	✔	✔	
HLR#	✔	✔	
PDW	✔	✔	✔
PCT	✔	✔	✔

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