

Short Instruction

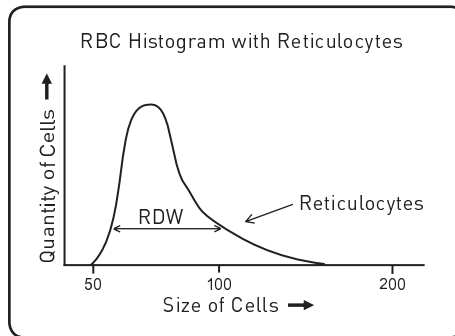
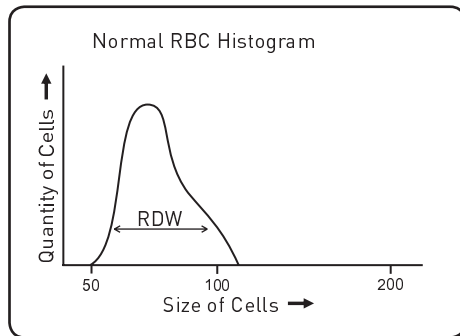
scil Vet abc Plus⁺

Indication for Reticulocytes

Reticulocytes are immature erythrocytes, which are released from the bone marrow into blood due to a lack of red blood cells. They have not completed the hemoglobin synthesis and are bigger than mature erythrocytes. If the number of reticulocytes in the blood is increased, the anemia is denoted as regenerative. With the scil Vet abc Plus+ reticulocytes can not be detected directly, but the analysis result of the scil Vet abc Plus+ provides hints on the presence of reticulocytes in the blood sample. Therefore you have to check the following parameters:

Histogram

Since erythrocytes are larger than mature reticulocytes, there are more large blood cells in the RBC-histogram noticeable. This is represented by a curve broadening:



MCV = Mean Corpuscular Volume of Erythrocytes



The MCV is the average volume of the erythrocytes. The bigger reticulocytes in a blood sample increase the average volume of red blood cells. Thereby the MCV grows.

RDW = Red Cell Distribution Width



The RDW, the wide distribution of erythrocytes, is a measure of the variation of the red blood cells from the average value. Since mature red blood cells hardly differ in their size, they exhibit a very homogeneous size distribution. The bigger reticulocytes in a blood sample lead to an increase in the size distribution. Therefore the RDW increases.

MCHC = Mean Corpuscular Hemoglobin Concentration



The MCHC is the mean hemoglobin concentration in the erythrocytes. Calculation formula: $(HB \times 100) / HCT$. Since the reticulocytes have not yet completed the hemoglobin synthesis, they possess a lower hemoglobin concentration. Thereby the MCHC decreases.

A suspicion of the presence of reticulocytes in a blood sample must implicitly be validated by a blood smear!



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