

Reticulocyte Count (Brilliant Cresyl Blue)

Reagents Needed:

Brilliant Cresyl Blue Stain, Stock
Sodium Chloride, 0.85% (w/v), Normal Saline

RICCA CHEMICAL COMPANY Cat. No. 1150
RICCA CHEMICAL COMPANY Cat. No. 7200

Recommended Method:

1. Dilute a small quantity of the Brilliant Cresyl Blue Stain Stock Solution with 80-180 times its volume of Normal Saline. The optimum dilution depends on personal preference and dye lot and should be determined by staining samples. Dilution with 140 volumes of Normal Saline is a good starting point.
2. Do not fix blood samples.
3. Mix one volume of blood sample with twenty volumes of the diluted Brilliant Cresyl Blue Stain in a white cell counting pipette.
4. Place the blood-stain mixture in a counting chamber.
5. Seal the fresh preparations with petroleum jelly to prevent disturbances due to drying.
6. Count immediately. Count at least 1000 Erythrocytes (preferably 3000) per test to determine the percentage of Reticulocytes.

Satisfactory Staining Results:

Microscopically, the reticulum (network and granules) of Reticulocytes is stained Blue and stands out distinctly. Nuclei of Leukocytes also stain Blue.

Normal Values Found:

For normal healthy young adults, Reticulocytes comprise 0.3 - 1% (usually 0.6 - 0.8%) of the total number of Erythrocytes.

In young infants, the percentage is 2 - 4 times higher than for young adults (0.6 - 4%).

Some sources give higher figures: 0.5-2% for adults and 5-10% for infants.

Consult RICCA CHEMICAL COMPANY Technical Reference Document TRD15 for details on Reticulocyte count using New Methylene Blue stains.

This is a typical staining procedure. These reagents may be suitable for other staining procedures. Consult staining reference books or standard operating procedures for other suitable uses of these products.