medilines

Reticulocyte count solution

DESIGN TO DEMONSTRATE

Reticulocyte (Red Cell showing a slight degree of immaturity. It has small filaments (diffuse or aggregated) of nuclear material (RNA) in the cytoplasm).

REAGENTS & PREPARATIONS

- medilines Reticulocyte count solution.
- Glass Slides.
- Small Test Tube.
- Microscope with oil immersion lens.

STAINING PROCEDURES

1. In a Test Tube, place 200 ul of medilines Reticulocyte Count Stain.
2. Add 200 ul drops of patient's blood, gently mix & plug the tube with non-absorbent cotton wool.
3. Incubate at room temperature or 37 C for 15-30 min.
4. Gently re-suspend the incubated blood, make a thin film on a glass slide & allow drying in air.
5. Examine an area of this unfixed film where the red cells should be well separated from each other, under oil immersion lens.
6. Count systematically at least 1000 RBCs, including in this the number of Reticulocyte at the same time. Reticulocyte appear larger than mature cells and contain irregular dark purple granules or fine thread of ribo-nuclear material.

Expected results

- RBC – blue
- Reticulocyte – blue with deep purple precipitate network.

Calculation

PERCENTAGE OF RETICULOCYTE

$$\frac{\text{No. of Reticulocytes counted}}{\text{No. of RBCs counted}} \times 100 = \ldots\ldots\% \text{ Reticulocyte}$$

Normal Values

Infant at birth	=	2.0 – 6.0%
Children up to 5 years	=	0.2 – 5.0%
Adults	=	0.5 – 2.0%

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