Thrombocount reagent R083

**Intended Use:**
Thrombocount Reagent is recommended for manual counting of thrombocyte (platelets).

**Composition**

**Formula adjusted, standardized to suit performance parameters**

**Ingredients**

- Ammonium oxalate monohydrate: 10.0gm
- Mercuric chloride: 0.01gm
- Distilled water: 990ml

**Directions**

1. Draw blood into a leukocyte pipette up to the 0.5 mark, then aspirate Thrombo-Count reagent (R083) up to the 11 mark. The dilution is 1:20. (A dilution of 1:100 can also be prepared, draw blood to the 1.0 mark of an erythrocyte pipette and thrombo-count reagent (R083) up to the 101 mark).
2. Mix blood and Thrombo-Count carefully, leave for 5 min, mix again briefly.
3. Discard the first 5 drops and fill the neubauer counting chamber, leave to sediment for approximately 15 min.
4. Counting is performed with a 40x objective. Count the thrombocytes in the 5 medium-sized group square from the center of the chamber (each of which is composed of 16 basic squares = 80 of the smallest squares with a chamber volume of 1/4000µl).

**Principle And Interpretation**
Thrombocyte counting is a routine method in haematological analysis. Dilution and preparation of a blood sample of known volume is the basis of thrombocyte counting method. The blood is hemolyzed by the reaction solution. The required cell type in a defined volume is counted and the number of cells per microliter of blood is then calculated.

**Type of specimen**

**Specimen Collection and Handling**
1. For clinical samples follow appropriate techniques for handling specimens as per established guidelines (2,3).

**Warning and Precautions**
In Vitro diagnostic use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

**Limitations**
1. Focus to recognize the silken shine of the spherical thrombocytes. All the erythrocytes are ideally destroyed. However, many membrane ghost or reticulocytes can be seen as shadow on the bottom of the chamber. A phase contrast microscope with green filter facilitates identification and counting of the thrombocytes.

**Performance and Evaluation**
Performance of the product is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

**Quality Control**

**Appearance**
Colourless solution.

**Clarity**
Clear without any insoluble particles.

**Calculation:**
Thrombocyte count = \( \frac{Nx\times4000}{80} = Nx1000\text{ cells/µl} (D=20) \)
Dilution factor (20 or 100)  
Number of thrombocytes in the group 5 square (80 of the smallest squares) 

Result:
Under high power magnification, count the cells in the five center squares of the Neubauer counting chamber.

When leukocyte pipette is used: count from 5 group squares x 1000
When erythrocyte pipette is used: count from 5 group squares x 5000

Normal range: 150,000-300,000 thrombocytes/μl

Storage and Shelf Life
Store between 10–30°C in a tightly closed container and away from bright light. Use before the expiry date on the label. On opening, the product should be properly stored in a dry, ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use.

Disposal
User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques (6,7).

Reference