

PLATELET DILUTING FLUID



PRINCIPLE

Platelets being segregated are fixed by the action of trisodium citrate and formaldehyde while detergent haemolysis RBCs to enhance clear enumeration in a counting chamber under a microscope 45X objective.

REAGENTS COMPOSITION

Tri Sodium citrate	3%
NaCl	1%
Formaldehyde	1%
Detergent	1%

Working Reagent Preparation

The Reagent is ready to use. Filter through Whatman No.1 if necessary.

STORAGE AND STABILITY

Stable at 25-35°C until expiry date printed on the label.

SAMPLE

Whole blood collected in EDTA. Direct peripheral blood from a finger prick is preferred.

(All samples should be handled as potential infective agents as no laboratory methods make conclusive findings for its safety. Therefore, adequate protective laboratory measures should be taken while handling such materials).

LIMITATIONS

Haemolysis will not be completed if the reagent sample ratio is less than 1:50. WBCs may also interfere in lower dilutions.

PROCEDURE

Freshly filtered

Platelet diluting fluid	-	2.00 mL
Whole Blood (well mixed)	-	0.02 mL

Mix well. Wait for 2 minutes to complete fixation and haemolysis. Mix well and charge one drop in a counting chamber. Keep the chamber for 10 minutes to settle the cells under a petridish moistened with wet cotton gauze to prevent drying.

Platelets can be seen as minute cells refracted in low light under high power objective of a microscope. Count 4 square millimeter (4WBC column) and calculate.

$$\text{Platelets per } \mu\text{L} = \frac{\text{TC} \times 10 \times 2.02 \times 1}{4 \times 1 \times 0.02}$$

OR **Total cells (In 4 square millimeter) x 252.5**
Where

$$\frac{\text{TC}}{4} = \text{Average of total cell counted in 4 square millimeter.}$$

$$\frac{10}{1} = \text{Depth of the counting chamber}$$

$$2.02 = \text{Total Reagent Volume.}$$

$$0.02 = \text{Sample Volume.}$$

$$1 = \text{Reported per one } \mu\text{L.}$$

EXPECTED VALUE

200,000 to 400,000/ μ L

Bibliography

1. HAND BOOK OF HAEMATOLOY TECHNIQUES (1969).
2. DELANEY J. W. AND GARRATTY G. 2nd Edn. London. Butterworths.

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