Current Status: *Active* **PolicyStat ID:** *10378237*

Origination: *1/14/2022*
Effective: *1/14/2022*
Last Approved: *1/14/2022*
Last Revised: *1/14/2022*
Next Review: *1/14/2024*
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Area: *Laboratory-Hematology*
Key Words:
Applicability: *Royal Oak*

High Containment Platelet Estimate-RO

Document Type: Procedure

I. PURPOSE AND OBJECTIVE:

This procedure provides instructions on performing a platelet estimate on high containment specimens. Due to high containment, these specimens cannot be run on the analyzer. A platelet estimate only will be performed when requested.

II. PRINCIPLE:

Platelet estimates are a verification of automated platelet counts and may also be used when there is a high containment situation. A platelet estimate only is performed on specimens which cannot be run on the analyzer due to high containment. An estimate of the platelet count may be obtained by averaging the number of platelets in 10 high-power (100x oil) fields and multiplying by a factor of 20,000.

III. SPECIMEN COLLECTION AND HANDLING:

Refer to CBC with Differential and Reticulocyte Sysmex XE-5000-RO and CBC with Differential and Reticulocyte Sysmex XN-3100-RO procedures.

IV. SUPPLIES:

A. **Equipment**
   1. Microscope slides
   2. Stain apparatus
   3. Microscope

B. **Reagents:** Refer to the procedure, "Blood Smears: Manual Slide Preparation and Staining-RO".

V. CALIBRATION:

See the Microscope Adjustment-RO procedure for instructions on Köehler illumination. This should be performed on a daily basis at minimum.

VI. QUALITY CONTROL:

Quality control consists of: (1) visual examination of the smear for quality appearance and successful staining as described in the quality control section of the procedure, "Blood Smears: Manual Slide Preparation and Staining-RO".

VII. PROCEDURE:

A. Make 2 peripheral smears from an EDTA specimen.

B. **High containment specimens only: Fix the smears in methanol for minimum of 30 minutes.**

C. Stain smears utilizing designated giemsa stain.

D. Under 10x or 20x dry objective, view/scan feathered edges and lateral edges of smear for platelet clumps/ platelet satellitosis.

E. Under 100x oil objective, count the platelets in a field where the RBCs are just touching. There should be approximately 100 RBCs in this field.)

F. Repeat step E. above for a total of 10 fields.

G. Average the number of platelets found in the 10 fields.

H. Multiply the average number of platelets by a factor of 20,000.

1. **Example:** Average number of platelets = 10

   10 x 20,000 = 200,000 bill/L

VIII. REFERENCES:

A. Lotspeich-Steininger (Koepke), etal, Clinical Hematology: Principles, Procedures, Correlations; 1992.

B. Burns ER, Lou Y, Pathak A. Morphologic Diagnosis of Thrombotic Thrombocytopenia. Am J Hematol 75:18-21, 2004.

Attachments

No Attachments

Approval Signatures

Step Description	Approver	Date
	Ann Marie Blenc: System Med Dir, Hematopath	1/14/2022
Hematology Medical Director Designee	Ann Marie Blenc: System Med Dir, Hematopath	1/14/2022
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Step Description	Approver	Date
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Applicability

Royal Oak