Beaumont

Origination: *5/13/2021*
Effective: *5/13/2021*
Last Approved: *5/13/2021*
Last Revised: *5/13/2021*
Next Review: *5/13/2023*
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Area: *Laboratory-Hematology*
Key Words:
Applicability: *Royal Oak*

Coagulation Equipment Quality Control- RO

Document Type: Procedure

I. PURPOSE AND OBJECTIVE:

The purpose of this procedure is to guide the medical technologist with their daily and quarterly quality controls.

II. ACRONYMS:

A. Clinical and Laboratory Standards Institute (CLSI)
B. Platelet Poor Plasma (PPP)
C. Quality Control (QC)

III. PROCEDURE:

A. Daily Quality Control:
    1. Record Temperatures (Temperature Documentation Log)
        a. Freezers
        b. Centrifuges
        c. Waterbath
        d. Refrigerators
    2. Temperatures must fall within posted tolerance limits on the daily temperature documentation log. If temperatures are outside specified limits for:
        a. Freezers: Temperature may be adjusted manually. Document corrective action on the Coag QC Corrective Action form. If unable to adjust, notify hematology management or call Facility Management (248-551-6300) to place a service call. Move items if necessary.
        b. Centrifuges: Temperatures may be adjusted manually. Document corrective action on the Coag QC Corrective Action form. If unable to adjust, notify hematology management or Facility Management (248-551-6300) to place a service call and place the centrifuge out of service.
        c. Waterbath: Temperature may be adjusted manually. Document corrective action on the Coag QC Corrective Action form. If unable to adjust, notify hematology management or call Facility

Management (248-551-6300) to place a service call. Use alternate 37°C water bath (special testing) to thaw specimens.

d. Refrigerators: Notify hematology management or call Facility Management (248-551-6300) to place a service call. Document corrective action on the Coag QC Corrective Action form. Move items if necessary.

B. Quarterly Quality Control:

1. **Centrifuge Platelet Checks**: The integrity of coagulation specimens must be checked every three months. Platelet-poor-plasma (PPP) with a platelet count of <10 bill/L should be obtained after centrifuging routine coagulation specimens in all coagulation centrifuges.

   a. Choose five fresh (non BRL) specimens that have not been centrifuged. Number them 1-5 without defacing the bar code. Invert them gently 2 or 3 times.

   b. Spin them in the selected centrifuge at correct speed and time, making note of the Asset tag # of the centrifuge.

   c. Remove from the centrifuge immediately upon stopping and perform platelet check within ten minutes.

   d. Position sample probe of hematology analyzer vertically into plasma directly in the middle of the tube (avoid the sides of the tube) and approximately ¼“ from the top surface of the plasma. Refer to Iris “Guideline for Platelet Poor Plasma Testing” (Attachment A).

   e. Record the platelet counts on the Quarterly Platelet Count Check log sheet.

   f. All specimens must achieve a platelet count of <10 bill/L.

   g. Specimens can then be processed on the coagulation instruments for requested testing.

   h. If two or more specimens have a platelet count above 10 bill/L go directly to steps a, b and c. If any one specimen has a platelet count above 10 bill/L, another specimen must be used. Mix the new fresh specimen gently, centrifuge it (using the centrifuge which gave the unacceptable platelet count). Run it on a hematology analyzer for a platelet count. If, on the new specimen, a platelet count above 10 bill/L is achieved:

      i. Fill out the “Equipment Corrective Action Log” on the back of the Platelet Check log sheet.

      ii. Notify hematology management or call Facility Management (248-551-6300) to place a service call for the centrifuge.

      iii. Do not use the centrifuge until the problem is resolved.

2. **Centrifuges:** Facility Management (248-551-6300) performs and documents the following centrifuge checks quarterly:

   a. Timer check.

   b. Speed check using a tachometer.

IV. REFERENCES:

A. Guideline for Platelet Poor Plasma Testing: Clinical Laboratory Standards Institute. Collection, Transport and Processing of Blood Specimens for Testing Plasma-Based Coagulation Assays: Approved Guideline-Fourth Edition, CLSI document #H21-A4. CLSI, 940 West Valley Road, Suite 1400, Wayne, PA 19087-1898 USA, 2003

Attachments

No Attachments

Approval Signatures

Step Description	Approver	Date
CP Chief Medical Director	Peter Millward: Chief, Pathology Service Line	5/13/2021
Coagulation Medical Director Designee	Marc Smith: System Med Dir, Coagulation	5/13/2021
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Applicability

Royal Oak