KAISER PERMANENTE®
COLORADO LABORATORY

BACKGROUND CHECK FOR DILUTING FLUIDS IN HEMATOLOGY

PRINCIPLE:

Fluids used in dilutions in various Hematology procedures are checked for non-specimen background particulates when opened and each day of use when patient testing is performed. This is done by examining samples of these fluids under the microscope or running the fluids on the Hematology analyzer and running an auto rinse (or startup) cycle and obtaining a WBC count of 0.0. Results are documented on the Hematology Diluting Fluid Background Check Log.

SCOPE:

All Medical Technologists and Medical Laboratory Technicians

SPECIMEN REQUIREMENTS:

1. Fresh diluting fluid aliquoted on a daily basis

EQUIPMENT AND MATERIALS

Equipment:

1. Microscope

Materials:

1. Saline (CBC dilutions and saline replacement)
2. pocH-D diluent (CBC dilutions)
3. Cellpack diluent (CBC dilutions)
4. Ammonium Oxalate (Body Fluids)
5. Microscope slide
6. Microscope cover slip
7. Disposable plastic pipette
8. Hematology Analyzer

CALIBRATION

None

QUALITY CONTROL

None

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PROCEDURE:

Microscopic Analysis:

1. To prevent contamination, pour (Do not pipette directly from stock reagents) an aliquot of the diluting fluid into a small test tube dilution vial or sterile container then capped. Initial and write the aliquot date on the tube or vial.

2. With a transfer plastic pipette, place a drop of the aliquot fluid on a microscope slide and place a coverslip.

3. Examine samples of these diluting fluids under the microscope (using the 40X dry objective) and ensure that they are free of non-specimen background particulates (such as bacteria or amorphous). If you observe non-specimen background particulates, diluting fluid cannot be used and must be replaced. The check must be performed when new diluting fluids are opened, each day of use for manual diluting methods or with each new lot or shipment.

4. Document diluting background check on the Hematology background check log as PASS or FAIL with your initials on the appropriate date.

Hematology Analyzer:

1. It is not necessary to perform a background check on the pocH-D reagent if the diluting fluid is obtained directly from the plastic container that is currently in use. A background count is performed as a part of the daily startup procedure.

2. Pour an aliquot of the XT Cell pack reagent into a secondary container and label it appropriately. Daily aliquots are obtained from the secondary container.

3. Pour (do not pipette directly) a small aliquot of the diluting fluid (Ammonium Oxalate, Saline and Cell pack) into a small test tube. Initial and write the aliquot date on the tube. This is the daily aliquot.

4. Perform an auto rinse cycle on the Hematology Analyzer – result must be within acceptable limits.

5. Run the diluting fluid on the open mode (XT) closed mode (poch-100i). Acceptable result is WBC = 0.0 thou / cmm. If results are not within limits, try performing the following:
    a. Repeat auto rinse
    b. Obtain a new aliquot
    c. Perform daily shutdown maintenance on the analyzer per procedure.

6. Document diluting background check on the hematology background check log as PASS or FAIL with your initials on the appropriate date.

CALCULATIONS

None

REPORTING RESULTS

None

REFERENCE RANGE

None

MAINTENANCE:

None

TROUBLESHOOTING:

- If the diluting fluid shows sign of contamination, discard and open a new stock diluting fluid.

LIMITATIONS AND INTERFERING SUBSTANCES

- Primary containers for Saline are good for up to three months once opened. Write the open date and the three month expiration date.
- Do not pipette directly into primary containers such as Saline, cell pack, pocH-D and Sodium Oxalate.

REFERENCES

1. CAP Limited Checklist LSV.43668, 9-2012