 <p>Franciscan Health System</p> <p>St. Anthony Hospital Gig Harbor, WA St. Clare Hospital Lakewood, WA St. Elizabeth Hospital Enumclaw, WA St. Francis Hospital Federal Way, WA St. Joseph Medical Center Tacoma, WA</p>	<p>POLICY</p>	<p>DOCUMENT NUMBER M-PO-HEM1324-04</p>
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<p>LH 750 RETIC COUNT SPECIMEN AND TESTING REQUIREMENTS</p>		

PURPOSE

To provide instruction for performing an automated reticulocyte count on the LH 750 Hematology Analyzer.

BACKGROUND

Reticulocytes are immature, non-nucleated erythrocytes, retaining a small network of basophilic organelles, comprised of RNA and protoporphyrin. The enumeration of reticulocytes provides a simple, effective means to determine red cell production and regeneration. Reticulocyte Production Index (also known as shift correction) provides further refinement to the CRC (corrected reticulocyte count). Anemia will have a shortened maturation time in the bone marrow and a longer time circulating reticulocytes in peripheral blood.

SPECIMEN REQUIREMENT


Primary specimen type: Whole blood collected in a tube that contains K2 or K3 EDTA anticoagulant.

Auto Mode sample volume: 1 ml. Approximately 300 µl is aspirated.
Manual Mode sample volume: 200µl is aspirated.

Specimen Stability: 48 hours.

REAGENTS / EQUIPMENT

1. Retic Stain—Reticulocyte staining solution is a specially formulated, New Methylene Blue (NWB) dyd that stains the reticulum. The retic stain is included in the LH 700 Series Retic Pak as Reagent A. Open reagent stability is 60 days.
2. Retic Clearing Solution—Reticulocyte clearing solution is a clearing reagent that removes hemoglobin from the erythrocytes (RBCs) without removing the precipitated dye-RNA complex, keeping the cell and its membrane intact. The Retic clearing solution is included in the LH700 Series Retic Pak as Reagent B. Open reagent stability is 60 days.
3. Diluent—LH700 series diluent is an isotonic electrolyte that dilutes the blood sample, stabilizes the cell membrane for accurate counting and sizing and conducts aperture current. Diluent also carries and focuses the sample stream in the flow cell of the Triple Transducer Module to direct the white blood cells

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individually through the aperture. It also rinses components between analyses. Open reagent is stable for 60 days.

4. Cleansing Agent—Coulter Clenz cleaning agent prevents protein buildup and keeps the system clean. Daily use eliminates routine aperture bleaching. Open reagent stability is 90 days.

QUALITY CONTROL

- Three levels of Retic-C Control—High, Medium and Low
- All three levels run every 24 hours.

VERIFYING REPORTABLE RANGES

The operating ranges reflect the range of values over which the instrument displays, prints and transmits results. The reportable range identifies the values where the instrument is accurate.

- The FHS lab uses commercial linearity material to establish linearity of each analyte. Each analyte has a verified reportable range.
- Reticulocyte reportable range: 0.2-25.0

CERNER (LIS) REQUIREMENTS

LIS Test Code: RET