1. **Principle**

The Galileo Echo is suitable for operation 24 hours a day. Initialization and daily maintenance must be done every 24 hours. The instrument should be powered down once a week.

Capture-R® Ready Indicator Red Cells can be used no more than 24 hours after a stir ball has been added to the vial. Vials of reagents other than Indicator Red Cells that have remained continuously on the Galileo Echo for 72 hours (3 days) should be removed and replaced with fresh vials. Vials of reagents other than Indicator Red Cells that are removed from the Galileo Echo when not in use and refrigerated can be used up to their expiration dates.

1. **Scope and Related Policies- N/A**
2. **Specimen**
   1. Centrifuged EDTA whole blood is used to perform “Group and Screen” and/or “Group” assay.
   2. EDTA plasma or serum may be used to perform the 3 cell antibody screen.
   3. It is important to check the anticoagulated EDTA samples for the presence of clots and/or hemolysis prior to testing. If a clot is present, the centrifuged plasma may be separated from the red cells and tested on Echo for the 3 cell screen. The red cells must not be run on the Echo. The ABO and Rh must be tested manually if enough free cells remain after separation, or a new sample must be requested.
   4. Samples that exhibit excessive hemolysis or lipemia or that are icteric should not be tested on the Galileo Echo. Samples that exhibit a hemolysis grade of 3+ or greater must not be tested on the Galileo Echo because they may generate erroneous results. Process any such samples by hand or request a new sample.
   5. For assays using Capture-R® Select, do not use hemolyzed samples of grade 1+ or greater for creating a monolayer. Fragmented red blood cell membranes will interfere with monolayer formation.
3. **Material**

Equipment: Immucor Galileo Echo

Supplies: PBS container

Liquid waste container

Strip holders/trays

Reagent/Donor/Sample racks

Reagents: Anti-A series 1

Anti-B series 3

Anti-D series 4

Anti-D series 5

Monoclonal control

Reverse A1 and B cells

Capture LISS

DAT control cells

CMT strips

Capture-R ready-Screen (3)

Capture-R Ready-ID, Select I & II

Capture-R Select

Capture-R Indicator Cells

WB corQC

PHIX

1. **Quality Control**
   1. Refer to Galileo Echo QC
2. **Procedure**
   1. Pre-running start-up
      1. Log on/off using first key on the upper left hand side of the screen.
      2. Verify that QC has been performed.
      3. Initialize instrument once every 24 hours by pressing the second key in the upper left hand side of the screen. Follow the instructions on the screen.
      4. Perform daily maintenance. Refer to Echo maintenance.
      5. Verify that liquid waste container is empty and PBS container is full.
   2. Performing a run
      1. Load samples for testing on sample racks. Samples should be loaded in the left hand lanes.
      2. Click on the running man, fourth key on the upper left hand side of the screen.
      3. Select test and click “Next”.
      4. Select samples for testing. This can either be done by individual samples, whole racks or select all.
      5. Click “Next”.

* + 1. If you haven’t already done so, load reagents listed on screen. As reagents are loaded they will be removed from the list.
    2. Reagent vials are loaded on reagent racks. These are placed in the right hand lanes.
    3. Sample and reagent racks are not interchangeable.
    4. Load strips onto strips holders on strip trays. These are placed in the microstrip loading bays on the right hand side of the analyser.
    5. If there are any issues with barcodes on samples/reagents/strips the Echo will give you an error.
    6. For reagents, see Procedural Notes 8.1 Manual Identification of Reagents.
    7. For samples, see Procedural Notes 8.2 Manual Identification of Samples.
    8. For strips, see Procedural Notes 8.3 Manual Identification of Strips.
    9. Click “Begin Tests”.
    10. When the testing is complete an audible sound will play and the batch report will appear on the screen. See 7.0 Reporting
  1. Stat Testing

The Galileo Echo will do STAT testing. However depending on the type of tests already running, the sample may not be initiated immediately.

1. **Reporting**
   1. Once batch is finished, an audible sound will play and the batch report will appear on the screen.
   2. Review all negative and equivocal (?) results for Capture-R Ready Screen (3), Ready-ID, Extend I and Extend II.
   3. Equivocal (?) results may be changed by right clicking on the sample ID in the left hand pane and selecting “Edit”.
   4. Right click on test group or individual samples. Select Approve and repeat selecting Export.
   5. Verify results in LIS (Cerner).
   6. Give specimens and requisitions to routine bench technologist to perform further testing as required and for check to be performed.
2. **Procedural Notes**
   1. Manual Identification of Reagent(s)

Whenever a reagent cannot be identified the ‘Reagents’ popup menu will appear on the screen with a blank space.

* + 1. Remove the corresponding reagent rack.
    2. Some reagent vials have two barcodes. Please ensure the proper barcode is facing the scanner.
    3. Replace the reagent rack on the analyser.
    4. If the error occurs again. You may remove rack and scan the barcode x2. Replace rack in the same lane.
    5. Close the Edit reagents menu.
  1. Manual Identification of Sample(s)

Whenever a sample cannot be identified the ‘Sample’ popup menu will appear on the screen with a blank space.

* + 1. Remove the corresponding sample rack.
    2. Scan the sample barcode x2.
    3. Replace rack in the same lane.
    4. Close the Edit samples menu.
  1. Manual Identification of Strips

Whenever a strip cannot be identified the Echo will give you an error balloon at the bottom of the screen. The 2D barcodes associated with the strips sometime fail.

1. Click “Edit” then “Strips” on the drop down menus.
2. Find the blank space for the corresponding strip.
3. Scan x2 the barcode from the tray the strip came from.
4. Enter the expiry date by scrolling through the calendar.
5. Close the Edit strip menu.
   * 1. Partially used strips cannot be reused.
6. **References**
   1. Galileo Echo Operator Manual, Chapter 7