1. **Principle**
   1. Determination of compatibility between donor red blood cells and recipient plasma/serum using the Capture-R Select strips.
   2. Red cell antibodies may cause agglutination or lysis of red cells, or may coat the red cells with globulins. Donor cells are incubated with patient serum/plasma at 37°C. After incubation, strips and are viewed for agglutination and/or hemolysis.
   3. Agglutination or hemolysis is usually an indication of antibodies.
2. **Scope and Related Policies**

Refer to SWIM manual, “Antiglobulin Crossmatch-Saline. LISS, PEG” sections 2.2, 2.2.1, 2.2.2, 2.2.3 and 2.3.

1. **Specimen**
   1. Plasma separated from EDTA anticoagulated whole blood.
   2. Serum centrifuged and separated from fully clotted whole blood.
   3. 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.
2. **Material**

Equipment: Immucor Galileo NEO

Supplies: System liquid container

Liquid waste container

Plate carriers

Reagent/Donor/Sample Rack

Reagents: PHIX buffered Saline

Capture-R Select Strips

CorQc Std

Capture-R Indicator Cells

Capture LISS

Capture-R Control Serum

1. **Quality Control**

CorQc Std and Capture-R Serum controls are required for crossmatching. The Positive and Negative controls must pass to validate the run.

1. **Procedure**
   1. Place bar code from donor unit onto a plastic or glass 12 x 75 mm test tube.
   2. Clip and drain 1 segment from donor unit into respectively labelled tube.
   3. Place patient sample on sample rack. Load sample rack on NEO.
   4. Order XM\_IgG. Place Donor Units on Donor rack.
   5. Scan Donor unit into screen. Click OK.
   6. Load Donor rack onto NEO.
   7. Load necessary resources. Click Start.
2. **Reporting**
   1. The results shall be reviewed and verified by the NEO technologist.
   2. The “IgG\_XM Report” sheet shall be printed and given to the technologist on the antibody bench to review and compare with previous results for the given patient prior to issuing the donor units to the patient.
3. **Procedural Notes**
   1. A maximum of 4 crossmatches can be done on the first strip. All subsequent strips in the same batch can do 8 crossmatches.
   2. The test tube containing the red cells from the donor segment shall be checked for the presence of fibrin or clots prior to loading on to the NEO for crossmatching.
   3. Caution should be exercised when choosing donor units. Verify ABO compatibility. The NEO performs an IgG crossmatch only and will not pick up IgM antibodies.
4. **References**
   1. Galileo NEO Operator Manual
   2. SWIM Manual