1. **Principle**

Rabbit red cells possess structures similar to the human antigens I, HI and H, and will bind with cold agglutinins having these specific­ities.

1. **Scope and Related Policies**
   1. Auto adsorption must not be performed using cells from a recently transfused (< 3 months) patient because the circulating transfused cells may adsorb the alloantibodies being sought. When transfused cells may be present, Rabbit erythrocyte stroma (RESt) should be considered for adsorption of cold antibodies.
2. **Specimen**

Patient Plasma to be adsorbed.

1. **Material**

**Equipment:** Serological centrifuge

Block for test tubes

Waterbath/Heating block at 37°C

**Supplies:** Test tubes – 10 x 75 mm

Serological pipettes

**Reagents:** 0.9% Saline

BCA RESt: Saline suspension of rabbit erythrocyte stroma. Store RESt at 2°C to 8°C. Do not use beyond the expiration date or if discoloration of the material has occurred.

1. **Quality Control – N/A**
2. **Procedure**

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| * 1. Label vial containing RESt. |
| * 1. Centrifuge at 3000 - 3400 rpm for a minimum of 2 minutes or until stroma is well packed. Tube for balancing is provided. |
| * 1. Remove the stopper from vial and carefully and completely aspirate the supernatant and discard. |
| * 1. Add 1 mL of the plasma to be adsorbed to the packed stroma. |
| * 1. Replace stopper and mix contents by vigorous manual agitation. |
| * 1. Incubate the plasma-stroma mixture at 4°C for 15-60 minutes. Mix occasionally during this incubation. |
| * 1. Centrifuge at 3000 - 3400 rpm for 2 minutes. |
| * 1. Harvest the adsorbed plasma immediately. |
| * 1. Test an aliquot of the adsorbed plasma at room temperature or 37ºC to determine if all the cold autoantibodies have been removed. If results indicate that adsorption was insufficient, repeat steps 6.1 – 6.8 using a new vial of RESt. |
| * 1. Test an aliquot of the twice adsorbed plasma at room temperature or 37°C to determine if all the cold autoantibodies have been removed. |
| * 1. If adsorption is complete, the adsorbed plasma is ready for use in antibody screen/identification or compatibility tests. |

1. **Reporting – N/A**
2. **Procedural Notes**
   1. Complete adsorption of unwanted cold autoantibodies may not always be possible. However, partial adsorption of the autoantibodies may be sufficient to reveal underlying alloantibodies that might also be present.
   2. The source material from which this product was derived shares antigenic determi­nants with A, B and P system antigens and would likely adsorb anti-A, anti-B or P, system antibodies. Therefore, RESt - adsorbed plasma should not be used for ABO reverse grouping.
   3. Rabbit red cells readily activate the alternative pathway of complement in human plasma. Some or most of the complement present, if plasma is used, will be inactivated following incubation with RESt.
3. **References**
   1. Manufacturer’s insert.
   2. Judd WJ ed. Judd’s Methods in Immunohematology 3rd ed. Bethesda MD; 2008:447-449.
4. **Revision History**

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| **Revision Date** | **Summary of Revision** |
| September 1, 2014 | * Revised name of manual * Specified “0.9% Saline” in section 4.0- *Reagents* * Updated list of references to include most recent editions |