1. **Principle**

The presence of red cell reactive HLA antibodies can interfere with the detection and identification of other potential clinically significant antibodies. Pooled Human Platelet Concentrate (HPC) is used to remove red cell related (RCR) HLA antibody to allow for the identification of other clinically significant antibodies that may have been masked.

HPC is rehydrated with patient serum and incubated at room temperature. During this incubation, any HLA related antibodies that are present will bind to the platelet HLA antigens.

1. **Scope and Related Policies**
   1. May be used when HLA antibodies (e.g. anti-Bg) are suspected, removal by HPC would indicate the presence of HLA antibodies.
   2. DO NOT perform exclusions for common clinically significant antibodies using HPC absorbed serum. Use of this product is for the identification of specificity of RCR HLA antibodies only.
2. **Specimen**

Serum ONLY is to be used

1. **Material**

**Equipment:** Centrifuge

Block for test tubes

Water bath/Heating block at 37°C

**Supplies:** Test tubes – 10 x 75 mm

Serological pipettes

**Reagents:** Commercial HPC Product (Immucor)

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

|  |
| --- |
| * 1. Label HPC tube with patient's name. |
| * 1. Remove the stopper from the HPC vial and add 1.0 mL of patient serum. |
| * 1. Replace the stopper and mix thoroughly, making sure any platelet concentrate on the stopper or sides of the vial is mixed into suspension. |
| * 1. Incubate for 15 minutes at room temperature. |
| * 1. Transfer the contents of the vial to a labelled tube and centrifuge at 3400 rpm for 10 minutes to separate the HPC from the adsorbed serum. |
| * 1. Remove the adsorbed serum carefully with a clean pipette and place in a tube labelled with the patient’s name and “HPC adsorbed serum”. |
| * 1. The serum can now be used for antibody investigation – test in parallel with unadsorbed serum as control for the result. |

1. **Reporting – N/A**
2. **Procedural Notes**
   1. In addition to HLA-related antibodies, the following specificities may be adsorbed by HPC: A, B, H, I, Lea, Leb, Fya, P+P1+Pk and Crs.
   2. DO NOT perform exclusions for common clinically significant antibodies using HPC adsorbed serum. Use of this product is for the identification of specificity of RCR HLA antibodies only.
   3. Test HPC adsorbed serum only against group O test cells as anti-A

or anti-B adhering to the platelets during the manufacturing process may be released into the patient’s serum during the adsorption process.

1. **References**
   1. Manufacturers insert for HPC, Immucor Inc. Norcross, GA
2. **Revision History**

|  |  |
| --- | --- |
| **Revision Date** | **Summary of Revision** |
| September 1, 2014 | * Specified “centrifuge at 3400 rpm” in section 6.5 |