1. **Principle**

The addition of IgG coated check cells to negative AHG tests (used to detect IgG) is required to confirm the validity of antibody detection and crossmatching tests. Anti-Human Globulin that does not bind to red cells during antiglobulin testing (i.e. negative AHG test) should still be present in the test tubes and should cause agglutination of the IgG coated check cells when they are added. Agglutination of the IgG coated check cells confirms that the anti-human globulin reagent was added to the test and was reacting appropriately.

IgG coated cells may need to be prepared if commercial cells are not available.

1. **Scope and Related Policies**

All reagents prepared in-house that contain a controlled substance must be labeled with a workplace label as per WHMIS legislation.9.1

1. **Specimen – N/A**
2. **Material**

**Equipment:** Cell Washer

Serological centrifuge

Block for test tubes

Microscope

Water bath/Heating block at 37°C

**Supplies:** Test tubes – 10 x 75 mm

Serological pipettes

Dropper bottle

**Reagents:** Saline

IgG anti-D

Segments from O Rh Positive red cells (confirm segment is Rh positive prior to starting procedure)

Alsevers Solution

1. **Quality Control** 
   1. Temperature of water bath or heating block should be checked and documented with each use. 9.2
   2. Centrifuge equipment shall be maintained as per manufacturer’s recommendations including speed of rotation and timing   
      device. 9.2
   3. Serological pipettes should be maintained as per manufacturer’s recommendations including adequate volume delivery, reduction of carryover and absence of contamination.9.2
   4. The IgG coated red cells should demonstrate a minimum 2+ grade agglutination in tests with reagents containing anti-IgG.9.3
2. **Procedure**

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| * 1. Label 6, 10 x 75 mm test tubes with "IgG check cells." Put the contents of 2 segments (or 1 mL Rh Positive whole blood) into each tube. |
| * 1. Add 4 drops of IgG anti-D reagent to each tube. |
| * 1. Incubate tubes at 37°C for 15 minutes. |
| * 1. Wash the contents of each tube 4 times with saline. Preserve the cells in Alsevers solution (add an equal volume of Alsevers solution). Initial and date the label, seal the tubes and store at 1-6°C until ready to use. |
| * 1. Each day, label a 10 mL dropper bottle "IgG check cells" and add your initials and the date. |
| * 1. Wash one tube of IgG sensitized control cells four times to remove the Alsevers. |
| * 1. Transfer the washed cells to the labeled dropper bottle and fill with saline to make a 5% suspension. |
| * 1. Each day discard the IgG sensitized control cells from the previous day, wash a fresh tube of cells four times and refill the well washed dropper bottle. |

1. **Reporting – N/A**
2. **Procedural Notes – N/A**
3. **References**
   1. WHMIS [www.whmis.ca](http://www.whmis.ca)
   2. CSTM Standards for Hospital Transfusion Services, ver 3 February 2011: 3.4.2.2; 3.4.3.1; 3.4.5.1.
   3. Judd WJ, Methods in immunohematology, 3rd ed. Montgomery Scientific Publications, 2008: 267-269.
4. **Revision History**

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| **Revision Date** | **Summary of Revision** |
| December 1, 2014 | * Revised name of manual * Revised wording of section 1.0 * Added section 2.0 * Revised and renumbered sections 5.0 & 6.0 * Updated list of reference to include most recent editions |
| September 4, 2015 | * Revised wording of principle |