**Purpose:**

This procedure provides instructions for antiglobulin crossmatch utilizing Polyethylene Glycol

(PEG) enhancement.

**Procedure:**

|  |  |  |
| --- | --- | --- |
|  | **Action** | **Related Documents** |
| **1** | * Confirm sample acceptability.
 | * Sample Acceptance Evaluation
 |
| **2** | * Label tubes.
* Arrange the tubes in the rack.
 | * Labeling Tubes for Manuel Bench Testing
* Manual Bench Set up
 |
| **3** | * Add **2** drops of patient plasma/serum.
 |  |
| **4** | * Add **1** drop of donor cells to respective tubes.
* Mix gently.
 |  |
| **5** | * Follow PEG Manufacturer’s package insert directions regarding:
* Amount of reagent
* Centrifugation
* Time of Incubation
* Washing
* Reading
 | * + Reading and Grading Tube Hemagglutination
	+ Washing Red Cell Samples (Manual or Automated Procedure
 |
| **6** | * If immediate spin phase is required, record results as a suppressed comment (BBCS) in Sunquest.
 | * Blood Order Processing Test Result Guide
 |
| **7** | * Add 2 drops of Anti-IgG
 |  |
| **8** | * Centrifuge for time specified by manufacturer’s package insert.
 |  |
| **9** | * Mix the tubes ***immediately.***
* Centrifuge per Manufacturer’s package insert.
 |  |
| **10** | * Immediately after centrifugation:
* Resuspend the cells, and
* Read macroscopically and record results.
 | * Reading and Grading Tube Hemagglutination Reactions
 |
|  **11** | * Validate all weak and negative antiglobulin results:
* Add 1 drop of IgG-coated control cells to each tube with a weak or negative antiglobulin result.
* Centrifuge per Manufacturer’s Package Insert.
* Resuspend the cells.
* Read macroscopically and record the results.

**Valid control results:** *Agglutination of at least grade 2 must be present or the test results are invalid.* |
|  | **Action** | **Related Documents** |
| **12** |

|  |
| --- |
| Analyze the reactions of the IgG-coated RBCs as follows: |
| **If agglutination is** | **Then…** |
| present | Test is complete. |
| absent | Test is invalid:* Repeat Steps 1-14.
* Consider cell washer problem or inactive AHG.
 |

 |

|  |  |  |
| --- | --- | --- |
| **13** | Consult the following table to interpret the compatibility test result. |  |
|   | If the IAT results show | Report the crossmatch as |  |
| * No hemolysis (at IS, 37 C) and no agglutination
 | * Serologic incompatibility was not present or was undetected.
 | * Compatible
 |
| * Hemolysis (at IS, 37 C) or agglutination (any strength)
 | * An incompatibility is present.
 | * Incompatible
 |
| 14 | * Check that the record is complete:
* Date and time of completion,
* Technologist identification, and
* Final clerical check
 | LIS Downtime Manual Bench Testing Form |

|  |  |  |
| --- | --- | --- |
| **15** | Complete the request: |  |
| **If the crossmatch result is**  | **Proceed to the following** |  |
| * **Compatible**
 | * Crossmatch Process
 | * Crossmatch Process
 |
| * **Incompatible**
 | * Antibody Identification Process
 | * Antibody Identification Process
* Emergency Release for Red Cells Process
* Consultation with the Transfusion Service Medical Director Procedure
 |

References:

AABB Technical Manual, Current Edition

Judd’s Methods in Immunohematology, Current Edition

Current version of reagent manufacturer’s package insert instructions.