**Purpose:**

This procedure provides instructions for antibody detection 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 Manual Bench Testing
	+ Manual Bench Set UP
 |
| **3** | * Add **2** drops of patient plasma/serum.
 |  |
| **4** | * Add **1** drop of screening cells to respective tubes.
* Mix gently.
 |  |
| **5** | * Follow Peg Manufacturer’s package insert directions regarding
* Amount of reagent
* Centrifugation
* Washing
* Reading
 | * + Reading and Grading Tube Hemagglutination Reactions
	+ Washing Red Cell Samples (Manual or Automated Procedure
 |
| **7** | * Add 2 drops of anti-IgG.
 |  |
| **8** | * Mix the tubes **immediately.**
* Centrifuge for the posted time in a calibrated serologic centrifuge.
 |  |
|  **9** | * Immediately after centrifugation:
* Resuspend the cells, and
* Read macroscopically and record results.
 | * + Reading and Grading Tube Hemagglutination Reactions
 |

|  |  |
| --- | --- |
| **10** | * + 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 for the posted time in a calibrated serologic centrifuge.
	+ 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 and the test must be repeated*. |

|  |  |
| --- | --- |
| **11** | * Analyze the reactions of the IgG-coated RBCs as follows:
 |
| **If agglutination is…** | **Then…** |
| * Present
 | * Test is complete.
 |
| * Absent
 | * Test is invalid:
* Repeat Steps 1-13.
* Consider cell washer problem or inactive AHG.
 |

|  |  |
| --- | --- |
| **12**  | * Consult the following table to interpret the compatibility test result.
 |
| If the IAT results show  | Report the antibody screen as |  |
| * No hemolysis and no agglutination
 | * Antibodies were not present or were undetected
 | Negative |
| * Hemolysis or any agglutination
 | * An incompatibility is present
 | Positive |
|  | * Check that the record is complete:
* Date and time of completion,
* Technologist identification, and
	+ Final clerical check
 |

|  |  |  |
| --- | --- | --- |
| **13** | * Complete the request:
 | * Antibody Identification Process
* Emergency Release for Red Cells Process
* Transfusion Service Medical Director Consultation report
 |
| **If the antibody detection test result is**  | **Then proceed to the following** |
| * **Negative**
 | * Process applicable to request
 |
| * **Positive**
 | * Antibody Identification Process
 |

References

AABB Technical Manual, Current Edition.

Judd’s Methods in Immunohematology, Current Edition.

Current version of reagent manufacturer’s package insert instructions.