**Purpose:**

This procedure provides instructions for antibody detection utilizing Polyethylene Glycol (PEG) enhancement.

**Procedure:**

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|  | | **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 |

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| **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*. |

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| **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. |

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| **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 | | | | |

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| **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.