**Purpose:**

This procedure provides instructions for antiglobulin crossmatch 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 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. | | |

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| **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 |

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| **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.