**Purpose:** This procedure provides instructions for antiglobulin crossmatch.

**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** | * Add **2** drops of LISS reagent. * Mix gently. |  |
| **6** | * Compare each tube for comparable appearance and volume. |  |
| **7** | * Incubate at 37 C for time specified by manufacturer’s package insert. |  |
| **8** | * Centrifuge for the posted time in a calibrated serologic centrifuge. |  |
| **9** | * Record macroscopic readings. | * Reading and Grading Tube Hemagglutination Reactions |
| **10** | * Wash the tubes four times with saline. | * Washing Red Cell Samples (Manual or Automated Procedure) |
| **11** | * Add 2 drops of anti-IgG.   + *Note: Anti-IgG is recommended for the LISS and saline IAT techniques; however, polyspecific antiglobulin reagent may be used.* |  |
| **12** | * Mix the tubes **immediately.** * Centrifuge for the posted time in a calibrated serologic centrifuge. |  |
|  | | **Action** | **Related Documents** |
| **13** | | * Immediately after centrifugation: * Resuspend the cells, and * Read macroscopically and record results. | * Reading and Grading Tube Hemagglutination Reactions |

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| **14** | * 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 present or the test results are invalid and the test must be repeated*. |  |

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| 15 | 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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| **16** | Consult the following table to interpret the compatibility test result. | | |  |
|  | If the IAT results show | | Report the crossmatch as |  |
| * No hemolysis (at 37 C) and no agglutination | * Serologic incompatibility was not present or was undetected. | * Compatible |
| * Hemolysis (at 37 C) or agglutination (any strength) | * An incompatibility is present. | * Incompatible |
| 17 | * 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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|  | | **Action** | | **Related Documents** |
| **18** | 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.