**Purpose**

This procedure provides instructions for how to perform a weak D test, which can be used to help resolve Rh typing discrepancies, and to determine whether RHIG is required for a postpartum patient.

**Policy Statement**

* Weak D positive individuals are considered Rh Positive as donors.
* Weak D positive individuals are considered Rh Negative as recipients.

**Procedure:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | | **Action** | | | | **Related Documents** | |
| **1** | * Check anti-D reagent manufacturer’s instructions to see if the same tube may be used for the weak D test if the original direct test with anti-D was done by tube. | | | | * Manufacturer’s Package Insert | |
| **If the original D test** | | **Then** | |  | |
| * Can be used | | * Proceed to Step 3. | |
| * **Cannot** be used | | * Proceed to Step 2. | |
| **2** | * Add reagents to clean labeled tubes: * Place **1** drop of anti-D reagent into a tube. * Place **1** drop of ABO/Rh control into a second tube. * Prepare a 3% to 5% patient red cell suspension, if not already available, per established procedure. * Add 1 drop of the 3% to 5% cell suspension into each tube. | | | | * Labeling Tubes for Manual Bench Testing * Preparation of 3-5% Red Cell Suspension | |
| **3** | * Mix and incubate tubes for 15 to 30 minutes at 37 C. | | | |  | |
| **4** | * Wash the tubes four times with saline per established procedure. | | | | * Washing Red Cell Samples (Manual or Automated Procedure) | |
|  | **Action** | | | | **Related Documents** | |
| **5** | * Add **2** drops of anti-IgG antiglobulin reagent. | | | |  | |
| **6** | * Mix the tubes immediately. * Centrifuge for the posted time in a calibrated serologic centrifuge. | | | |  | |
| **7** | * Immediately after centrifugation: * Resuspend the cell button and observe for agglutination. * Read macroscopically and record results per established procedure. | | | | * Reading and Grading Tube Hemagglutination Reactions * SQ Blood Order Processing Test Result Guide | |
| **8** | * Validate all negative or weak antiglobulin results by adding Check cells: * Add **1** drop of IgG-coated control cells to each tube with a negative or weak result. * Centrifuge for the posted time in a calibrated serologic centrifuge. * Resuspend the cells. * Read macroscopically for agglutination 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*. | | | |
| **9** | * Analyze the reactions of the IgG-coated RBCs as follows: | | | |  | |
|  | **If agglutination is…** | | **Then…** | |  | |
|  | * Present | | * Test is complete. | |  | |
|  | * Absent | | * Test is invalid: * Repeat Steps 1-7. * Consider cell washer problem or inactive AHG. | |  | |
| **Interpreting weak D test results** | | | | | | |
|  | * Interpret the **valid** IAT results as follows: | | | | |  |
| **If the anti-D IAT result shows** | **And the control IAT result shows** | | **Then interpret the D result as** | |
| * Agglutination * ≥ W + | * No agglutination | | * D positive. | |
| * No agglutination | * No agglutination | | * D negative | |
|  | * Mixed Field agglutination | * No agglutination | | Do Not interpret until further investigation and resolution is completed | | Discrepant Result Resolution Process |

**References:**

Standards for Blood Banks and Transfusion Services, Current Edition

Roback J (ed). Technical Manual, Current Edition

Current version of reagent manufacturer’s package insert instructions