**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.
* Candidacy for administration of Rh Immune Globulin will be determined by clinical care team.

**Procedure:**

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| --- | --- | --- | --- | --- |
| **Step** | | **Action** | | **Related Documents** |
| **Perform Weak D Test** | | | |
| 1 | Check anti-D reagent manufacturer’s instructions:   * + Same tube may be used for the weak D test if the original direct test with anti-D was done by tube.   Is a Control tube required?   * + **Weak D test is Positive ≥ W+**   + Manufacturer’s reagent instructions     - Saline control     - Direct Antiglobulin Test     - Manufacturer’s control | | 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, if required by manufacturer.   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 |
| **Step** | | **Action** | | **Related Documents** |
| 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) |
| 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. |  |
| **Validate Completed Test Results** | | | |
| 10 | Testing is unresolved/invalid if:   * Positive anti-D tube with no control tube performed * Positive control * Positive DAT with anti-IgG * Mixed field reaction | * Additional lot numbers * Other manufacturers * Result testing on ABO/D Discrepancy Worksheet * Eluate * Antibody Investigation * Transfusion history | ABO/D Discrepancy Worksheet  Eluate Testing Guidelines  Guidelines for Antibody Identification |

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| --- | --- | --- | --- | --- |
| **Interpreting weak D test results** | | | | |
|  | * Interpret the **valid** IAT results as follows: | | | SQ Blood Order Processing Test Result Guide |
| **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. * Update BAD file: * WKDP * “Give Rh Neg” |
| * No agglutination | * No agglutination or not required by manufacturer | * D negative * Update BAD file: * WKDN |
|  | * 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

AABB Technical Manual, Current Edition

Current version of reagent manufacturer’s package insert instructions