**Model SOP**

**Standard Operating Procedure**

**Name of the facility / activity : Weak D (Du) testing**

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| **SOP no.**  | **Effective Date** | **Pages** | **Prepared by**  | **Authorised by**  |
| 2.3 | 27-11-2000 | 3 |  |  |
| **Version** | **Review Period** | **Date of Review** | **Reviewed by** | **Number of copies** |
| VI | 2 years | 01-01-2015 |  | 10 |
| **LOCATION** : Red cell serology laboratory |
| **SUBJECT** : Weak D (Du) testing |
| **FUNCTION** : Identify patients with the Weak D phenotype. |
| **DISTRIBUTION** : Supervisor in charge of Red Cell Serology Laboratory Master File |

1. **SCOPE & APPLICATION:**

Some red cells possess the D antigen but it is expressed so weakly that the cells are not agglutinated directly by anti-D sera. An indirect antiglobulin test is necessary to identify patients with the Weak D (formerly known as Du) phenotype. Weak D testing is done on all prenatal patients and candidates for Rh immune globulin. Weak D testing is also done on Rh negative donors to ensure they are truly D negative. It may or may not be done routinely on Rh negative candidates for transfusion, depending on the policy of the transfusing institution. If routine weak D testing is done, weak D positive patients should receive Rh positive blood.

1. **RESPONSIBILITY:**

It is the responsibility of the technician/supervisor in the red cell serology laboratory to perform the Weak D (formerly known as Du).

1. **MATERIAL REQUIRED:**
* 37oC incubator
* Wash bottle with physiologic saline
* Coombs serum - either polyspecific or anti-IgG
* Coombs control cells
* All reagents, equipment, and supplies used in the Rh TESTING procedure.
1. **PROCEDURE:**
2. Prepare a washed, 3% suspension of patient cells.
3. Take one 1 drop of anti D (Ig G) in a cleaned labelled test tube.
4. Add 1 drop of 2-5% labelled test RBCs suspension.
5. Mix & incubate at 370 C x 45 min.
6. If still negative, add 1 drop of AHG reagent and centrifuge at 1000 rpm x I min.
7. Record results in the appropriate column on the worksheet
8. Record results. Confirm all negative reactions microscopically.
9. Confirm all negative results by adding one drop Coombs control cells to all tubes showing no agglutination and centrifuge 15-30 seconds at high speed in the serofuge.
10. Gently resuspend and examine for agglutination. Agglutination should be present in this step or the test is invalid.

***Interpretation :***

No agglutination- DU negative
Agglutination - DU positive

A true weak D should give at least a 2+ positive result. Weaker results may be due to mixed field agglutination in an Rh negative individual who received Rh positive blood, or vice-versa. Obtain a recent transfusion history on patients who give inconclusive weak D results.

1. **DOCUMENTATION:**

Enter all results in grouping register.

1. **REFERENCES**

Technical Manual of American Association of Blood Banks – 15th Edition, 2005.

1. **END OF DOCUMENT.**