

## **TEST: Rh (D) RED BLOOD CELL TYPING**

### **PRINCIPLE:**

The D(Rh<sub>0</sub>) antigen was first recognized in 1939 and subsequently found to be present on the erythrocytes of approximately 85% of the Caucasian population. Human red blood cells are classified as Rh positive or Rh negative depending solely on the presence or absence of the D antigen. Accordingly, anti-D serum is used for routine Rh determination. Presence of the D<sup>u</sup> variant of the Rh<sub>0</sub> or D antigen is also tested in this procedure.

Rh (D) typing is based on the principle of agglutination. Normal human red blood cells, possessing antigens, will clump in the presence of antibody directed toward the antigens. Agglutination of patient or control red blood cells with anti-D serum and no agglutination with the control reagent is a positive test result, which indicates the presence of the D antigen on the red blood cells. Absence of agglutination is a negative test result, which indicates the D antigen is not demonstrable.

### **SPECIMEN REQUIREMENTS:**

10 ml red top serum tube without serum separator.

No special preparation of the patient is required prior to specimen collection. Do not use serum tubes with serum separator gel. This may interfere with results, causing false agglutination. All serum tubes received for ABO-RH typing with a serum separator will be rejected.

Fresh cells washed once and prepared as a fresh 2 - 5% cell suspension in saline. (See Rh Typing procedure.) If Rh typing is negative, D<sup>u</sup> Typing is automatically performed.

### **REFERENCES:**

Technical manual. 9th ed. Arlington, VA; American Association of Blood Banks, 1985

**Results are reported as Rh positive or Rh negative**

**Turnaround Time:** One day