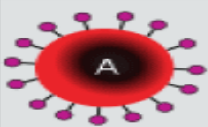
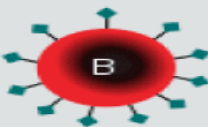
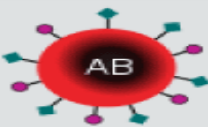
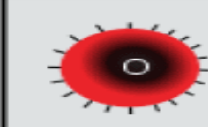
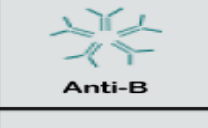




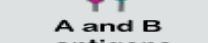


Blood Group

- Blood group means classification of blood based on the presence or absence of inherited antigenic substances on the surface of red blood cells (RBCs).
- These antigens may be proteins, carbohydrates, glycoproteins, or glycolipids, depending on the blood group system.
- Some of these antigens are also present on the surface of other types of cells of various tissues.

TYPES OF BLOOD GROUP

- **Type A:** blood has RBCs with surface antigen A only and the plasma contains anti-B antibodies. Reported is A
- **Type B:** blood has RBCs with surface antigen B only and the plasma contains anti-A antibodies. Reported is B
- **Type AB:** blood has RBCs with both A and B surface antigens and the plasma has neither anti-A nor anti- B antibodies. Reported is AB
- **Type O:** blood has RBCs lacking both A and B surface antigens and the plasma contains both anti-A and anti-B antibodies. Reported is O

	Group A	Group B	Group AB	Group O
Red blood cell type				
Antibodies in plasma			None	
Antigens in red blood cell				None

- Determination of blood group depends on immunological reactions between antigen and antibody.
- Antigens are also called agglutinogens because of their capacity to cause agglutination of RBCs.

RH SYSTEM

- The Rhesus system (Rh) is the second most important blood group system in humans. The most significant and immunogenic Rhesus antigen is the RhD antigen
- Depends on the presence and absence of another antigen on the surface of RBC called Rhesus (Rh) .
- The term Rh positive (Rh+) indicates the presence of the Rh surface antigen.
- The absence of this antigen is indicated as Rh negative (Rh-).
- The ABO and Rh blood grouping system is based on agglutination reaction. When red blood cells carrying one or both the antigens are exposed to the corresponding antibodies they interact with each other to form visible agglutination or clumping.

Material Required

- *Anti A
- *Anti B
- *Anti RhD
- *slide
- *Disposable Mixing Stick
- *Blood Lancet
- *70% Alcohol/ Spirit
- *Cotton

Note:- the Agglutination of blood occur when presence of same antigene and antibody.

PROCEDURE

- Clean the fingertip to be pierced with spirit or 70% alcohol (usually ring or middle finger).
- With the help of the sterile lancet, pierce the fingertip and place one drop of blood in each of the cavities.
- Add one drop of antiserum into each cavity as shown below:

INTERPRITATION

- If agglutination is observed when blood is mixed with anti A reagent, then the individual is said to have blood group “A”.
- If agglutination is observed when blood is mixed with anti B reagent, then the individual is said to have blood group “B”.
- If agglutination is observed when blood is mixed with anti A and anti B reagent, then the individual is said to have blood group “AB”.
- If no agglutination is observed when blood is mixed with anti A and anti B reagent, then the individual is said to have blood group “O”.