

The Determination of the ABO and Rh (D) Blood group:

It is now realized that human red cells contain far more inheritable blood group antigens than was thought at one time fifteen well defined systems of antigens are recognized there are in order of discovery the ABO, MNS, P, RH, Lutheran, Kell, Lewis, Duffy, Kid, Diego, Yt, Li, Xg, Dombrok and Colton blood group system. But only the ABO and RH system of major clinical importance the others are of less importance because the antigens are weak ones and or because the corresponding antibodies are not present normally or occur only following multiple transfusions or because when present they usually react only at low temperature.

The Relative frequencies of the different blood types (in Caucasoid) :

O is 47%

A is 41%

B is 9%

AB is 3%

Rh+ 85% in white American

Rh- 15% in white American

Rh+ 95% in black American

Rh- 5% in black American

Rh+ 100% in black African

Blood typing:

Before giving a transfusion, it is necessary to determine the blood type of the recipient and the blood type of the donor so that the blood can be appropriately matched.

Erythroblastosis fetalis:

Is a disease of the fetus and newborn characterized by agglutination and phagocytosis of the red blood cells.

The procedure of ABO blood groups:

- 1-Devide a microscope slide into three areas A,B and O.
- 2-Place one drop of anti-A serum ,anti-B serum and anti- D serum in areas A, B, and divisions respectively.
- 3-PrIKE a finger with a sterile lancet and removed the first drop of blood.
- 4-Add one drop of blood into each division (A, B, and D) next to the drop of test serum and mix them well with a glass rod or a clean match stick.
- 5-After 2 minutes observe the area for the evidence of agglutination of the red cells (read microscopically).
- 6-Find out the blood groups using the following table:

Blood group	anti-A	anti-B	anti-D
A	+	-	
B	-	+	
AB	+	+	
O	-	-	
Rh +	(positive)	+	
Rh -	(negative)	-	

(+) indicates agglutination

(-) means no agglutination