

ABO BLOOD GROUPING

Landsteiner Group	Antigen on RBCs	Antibodies in Serum	May donate blood to	May receive blood from
A	A	Anti-B	A + AB	O + A
B	B	Anti-A	B + AB	O + B
AB	AB	None	AB	Universal recipient
O	None	Anti-A + Anti-B	Universal donor	O

How to Read your Results

Blood type	Anti-A	Anti-B	Anti-D	control
O-Positive	●	●	●	●
O-Negative	●	●	●	●
A-Positive	●	●	●	●
A-Negative	●	●	●	●
B-Positive	●	●	●	●
B-Negative	●	●	●	●
AB-Positive	●	●	●	●
AB-Negative	●	●	●	●
Immolid	●	●	●	●

Prepared by

- 1) MAKWANA HIRAL A
- 2) MAKWANA KHUSHBU K.
- 3) GO SWAMI SMITA M.

Introduction :- Blood group system were discovered by German scientist, Karl Landsteiner (1900). He observed that RBCs of some individuals were agglutinated by the serum of other individuals. He classified these individuals into three groups as A, B and O on the basis of the presence or absence of antigen A or B on RBCs. Two years later in further experiment by his pupils, von Decastello and Sturli (1902) a fourth experiment by his group was identified as AB, which showed both A and B antigens.

ABO blood groups :- ABO blood group system consist of four types of blood group based on the types or antigen A and B present on RBCs. Blood always contain natural antibodies or IgM class against the antigen, which is absent in RBC.

Principle :- The antibody, which is present in serum and plasma, develop at birth. These types of antibodies are called "natural antibodies", other develop only after the exposure to antigen, these are called "immune antibodies". The antigen, which are present on the surface of RBC, are generally determined by ABO system, the blood group is inherited factor and is present from birth only. Blood group is the direct indication of specific antigen present in blood, depends can be divided into four groups of A, B, AB and O.

Requirement :-

1. Lancet, Normal saline solution, 70% alcohol
2. cavity slides or plastic card
3. Anti sera typing: A, B and D.

Procedure :-

1. Take 4 cavity slide and label as A, B and O
2. Place in each respective cavity one drop of serum A, B and O
3. Disinfect the fingertip and make a puncture
4. Add 2 drop of blood in each of the three cavities mix it thoroughly
5. Rotate the slides gently for about 2-3 minutes
6. observe for clumping of red cells
7. Record your result.