

Agglutination reaction



**ASSIGN
BUSTER**

Agglutination Reaction Date performed: May 7, 2012 Group members present: Tan, Kevin Kyle Sy Ting, Shermae Tomimbang, Charisse Christine I.

Introduction Agglutination is the clumping of particles. The word agglutination comes from the Latin agglutinare, meaning "to glue." This occurs in biology in three main examples: 1. The clumping of cells such as bacteria or red blood cells in the presence of an antibody. The antibody or other molecule binds multiple particles and joins them, creating a large complex. 2. The coalescing of small particles that are suspended in a solution; these larger masses are then (usually) precipitated. 3. An allergic reaction type occurrence where cells become more compacted together to prevent foreign materials entering them. This is usually the result of an antigen in the vicinity of the cells. 4. Also occurs when people are given blood transfusions of the wrong blood group. A blood type is a 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. Several of these red blood cell surface antigens can stem from one allele (or very closely linked genes) and collectively form a blood group system. Blood types are inherited and represent contributions from both parents. II. Materials Antisera A and B Whole peripheral blood Applicator sticks III. Methodology 1. Place two drops of unknown blood types separately on each side of a clean glass slide. 2. Add a drop of antisera — A to one drop of blood and one drop of antisera — B to another drop of blood. 3. Mix the blood antisera suspension using separate applicator sticks. 4. Observe for agglutination reactions. Blood Type | Anti-A |

Anti-B | A | There is agglutination | No agglutination | B | No agglutination |
There is agglutination | AB | There is agglutination | There is agglutination | O
| No agglutination | No agglutination | Type A — presence of antigen A and
antibody b Type B — presence of antigen B and antibody a Type AB —
presence of antigens A and B, absence of antibodies a and b Type O —
absence of antigens A and B, presence of antibodies a and b IV. Results
Based on the results of the said experiment, one can easily detect if your
blood is type A if there is a clumping of RBC on antisera A only. Type B, if
there is a clumping of RBC on antisera B only; type AB is there is clumping of
RBC on both antisera A and B; and lastly, your blood is type O if there is no
clumping of RBC at all on both antisera A and B. V. Conclusion Based on the
results of the said experiment, one can easily detect if your blood is type A if
there is a clumping of RBC on antisera A only. Type B, if there is a clumping
of RBC on antisera B only; type AB is there is clumping of RBC on both
antisera A and B; and lastly, your blood is type O if there is no clumping of
RBC at all on both antisera A and B.