

Laboratory Exercise 6: ABO Slide Agglutination Test

Objectives:

1. Using the slide agglutination method, determine with 100% accuracy the ABO group of specimens using reagent antiseras, blood specimens, and other materials provided.
2. If applicable, evaluate reagent package inserts / instructional materials to determine the substance being analyzed, the principle of the procedure, the expected value, significance of abnormal results, limitations of the procedure, and troubleshooting procedures to follow if / when control results are unacceptable.
3. Utilize lecture notes, textbook and laboratory information to answer study questions.

Principle:

When red cells are mixed with various reagent antiseras (soluble antibody), agglutination will occur on the slides containing cells positive for (possessing the antigen) the corresponding antigen. No agglutination will occur when the red cells do not contain the corresponding antigen. One primary application of this principle is blood typing.

Limitations of the Procedure:

1. Carefully dispense the red cell suspension and antibody in separate areas of the slide. Adding red blood cells directly to the drop of antisera may cause splash back, resulting in contamination of the red blood cells.
2. When mixing the antibody with the red blood cells make sure the mixture covers the entire bottom of the testing area. Inadequate spreading of the mixture will make interpretation difficult and may result in misinterpretation of results.
3. It is critical to read the results at the end of the designated time. Allowing the reaction to go beyond the allotted time may result in the drying of the reactants, resulting in a false positive.

- Material:**
1. Antibody A
 2. Antibody B
 3. Red blood cells (#1 and #2)
 4. Slides
 5. Applicator sticks
 6. Pipets

- Procedure:**
1. On the section of slide labeled anti-A place one drop of antibody A.
 2. On the section of slide labeled anti-B place one drop of antibody B.
 3. Place one drop of cells in each antibody containing circle.
 4. Carefully mix each solution with a separate applicator stick.
 5. Tilt slowly for one minute.
 6. Record results.

Interpretation: Agglutination (clumping) of the red blood cells is positive. No agglutination is negative. It is critical to read the results immediately as false positives can occur when the mixture begins to dry on the side.

<u>anti-A</u>	<u>anti-B</u>	<u>Blood Group</u>
+	0	A
0	+	B
0	0	0
+	+	AB

Name _____

Slide Agglutination Test Recording Results

Record your reactions for sample 1 and 2 in the boxes below. Write “aggt” if agglutination was observed, write “no aggt” if no agglutination occurred. Use the table on the previous page to interpret your results.

Sample	Anti-A	Anti-B	Interpretation
Number 1			
Number 2			

1. Describe the process of agglutination as you understand it.

2. Describe in your own words why agglutination occurred with one antisera but not with another.