

Got Blood?

Physiology Lab
Dr. Perkins

****class set****

Background:

There are four blood-typing stations set up in the room. You will go to each one and test the “blood” there with the two testing fluids provided. You will observe the reaction of each test, and use these observations to determine the blood type at each station. Leave all the materials at each station.

Procedures:

1. At your first station (1), place 3 droppers of the “blood” into a container. Label the container with the station number and “anti-A.”
2. Add 10 drops of the anti-A testing fluid to the blood and mix with a toothpick. This fluid simulates an anti-A antiserum. When real blood is typed, anti-A antiserum reacts with markers called antigens on the surface of the red blood cells in the blood.
3. Observe and record what happens on your Lab Worksheet. If the blood clumps, as shown in Figure 1A, the reaction is positive. You can record a positive reaction with a plus sign (+). If nothing happens to the blood, as shown in Figure 1B, the reaction is negative. This reaction can be recorded with a minus sign (-).

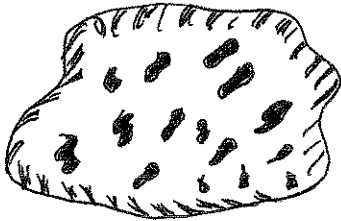


Figure 1A

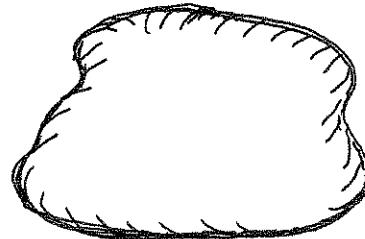


Figure 1B

4. Place another dropper of the same blood into another container. Label the container with the station number and “anti-B.”
5. Add 10 drops of the anti-B testing fluid to the blood and mix with a fresh toothpick. This fluid simulates an anti-B antiserum, which is used in blood typing to detect the presence of B antigens on the surface of the red blood cells in the blood.
6. Observe and record what happens.
7. Repeat the procedure at each of the other three stations. Record your results each time.

Interpreting Your Observations:

Use the information below to determine which blood type is being simulated at each station.

TABLE 1:

ANTIGENS ON RED BLOOD CELLS*	BLOOD TYPE
A	A
B	B
Both A and B	AB
Neither A nor B	O

* A positive reaction to the anti-A antiserum means the blood contains the A antigen; a positive reaction to the anti-B antiserum means the blood contains the B antigen.