Name: _____ Group: _____ Date: _____

LAB 57
OBSERVATION

DETERMINING BLOOD TYPE

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Goal

Identify different blood types using serums.

Observation criteria

1. For each blood type in the following table, identify substances found on red cells by placing a checkmark in the appropriate box.

Blood type	Substance found on red cells		
	A	B	Rh
A^-			
A^+			
B^-			
B^+			
AB^-			
AB^+			
O^-			
O^+			

2. The anti-A serum coagulates red cells that carry substance A. Red cells of what blood types coagulate when exposed to this serum?

_____

_____

3. The anti-B serum coagulates red cells that carry substance B. Red cells of what blood types coagulate when exposed to this serum?

_____

_____

4. The anti-Rh serum coagulates red cells that carry substance Rh. Red cells of what blood types coagulate when exposed to this serum?

_____

_____

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Materials

- marker
- spot plate
- dropper bottle of blood sample 1
- dropper bottle of blood sample 2
- dropper bottle of blood sample 3
- dropper bottle of blood sample 4
- box of toothpicks
- clean cloth *or* paper towel
- dropper bottle of anti-A serum
- dropper bottle of anti-B serum
- dropper bottle of anti-Rh serum
- stopwatch *or* watch

Procedure

1. Label the spot plate with the marker as indicated in Figure 1.

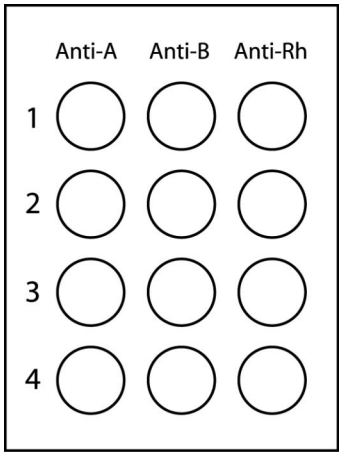

Figure 1 Preparing spot plate

2. Add 2 drops of blood sample 1 to each well of row 1.

3. Add 2 drops of blood sample 2 to each well of row 2.

4. Add 2 drops of blood sample 3 to each well of row 3.

5. Add 2 drops of blood sample 4 to each well of row 4.

6. Add 2 drops of anti-A serum to each well of left column.

7. Mix the contents in each well of left column in turn with a toothpick, wiping it clean after each use.

8. Add 2 drops of anti-B serum to each well of centre column.

9. Mix the contents in each well of centre column in turn with a toothpick, wiping it clean after each use.

10. Add 2 drops of anti-Rh serum to each well of right column.

11. Mix the contents in each well of right column in turn with a toothpick, wiping it clean after each use.

12. Set aside the spot plate for 3 minutes.

13. Observe if a precipitate forms in each well and record your observations.

14. Clean up and put away materials.

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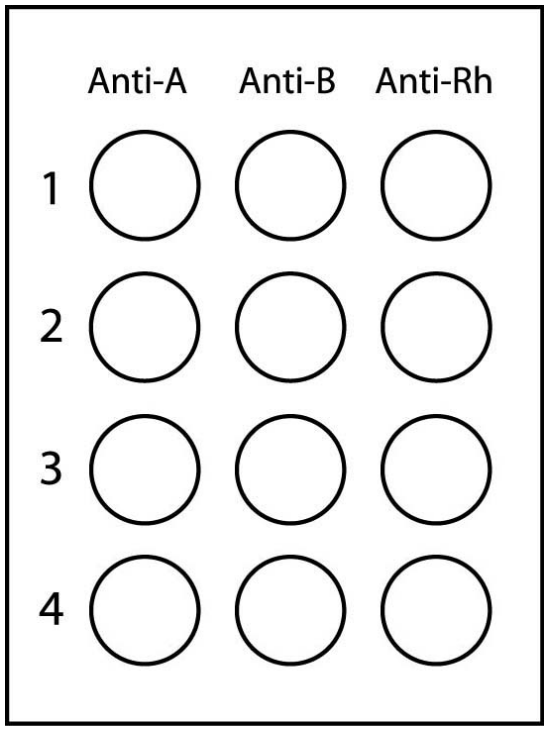
Observations

Fill in each circle corresponding to a well of the spot plate in which a precipitate forms. Give the figure a title.

Title:



Reflecting on your observations

1. What is the blood type of each test sample based on your observations?

Sample	Blood type

Name: _____ Group: _____ Date: _____

2. Which test sample contains blood referred to as “universal recipient”?

_____

3. Which test sample contains blood referred to as “universal donor”?

_____

4. A person whose blood type matches that of test sample 1 could be given blood of the type contained in which other test sample?

_____

5. Do your observations help you to better understand different blood types?

_____

_____

_____

6. How could you improve the protocol for this lab?

_____

_____

_____