

Practical Session 3 - ABO and Rh Blood Groups

Learning Outcomes

- To understand how forward ABO groups are determined:
 - To determine ABO blood groups using tile method
 - To determine ABO blood groups using tube method
- Use of the ABO blood group interpretation chart

Reagents and materials

Anti A	Blue anti-sera reagent
Anti B	Yellow anti-sera reagent
Anti D	Colourless anti-sera reagent
x 5 Patient samples	Pre-prepared at 3% concentration
Mixing sticks	
Plastic pipettes	
Tile cards	(for tile groups)
Plastic tubes	(for tube groups)

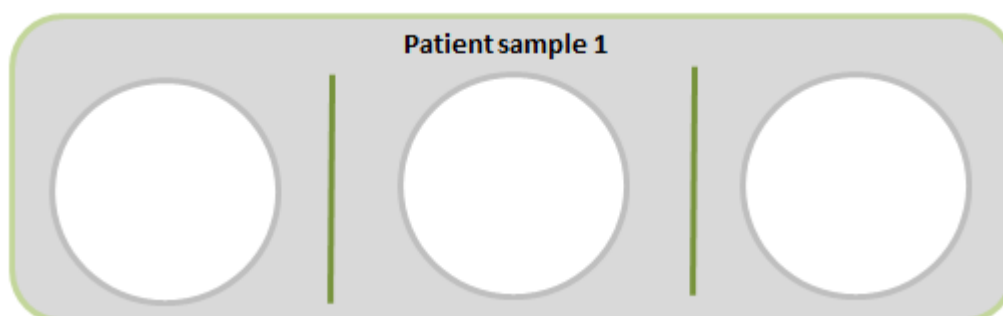
Exercise 1: ABO and Rh D Blood Grouping - Tile Method (1 hour)

Task

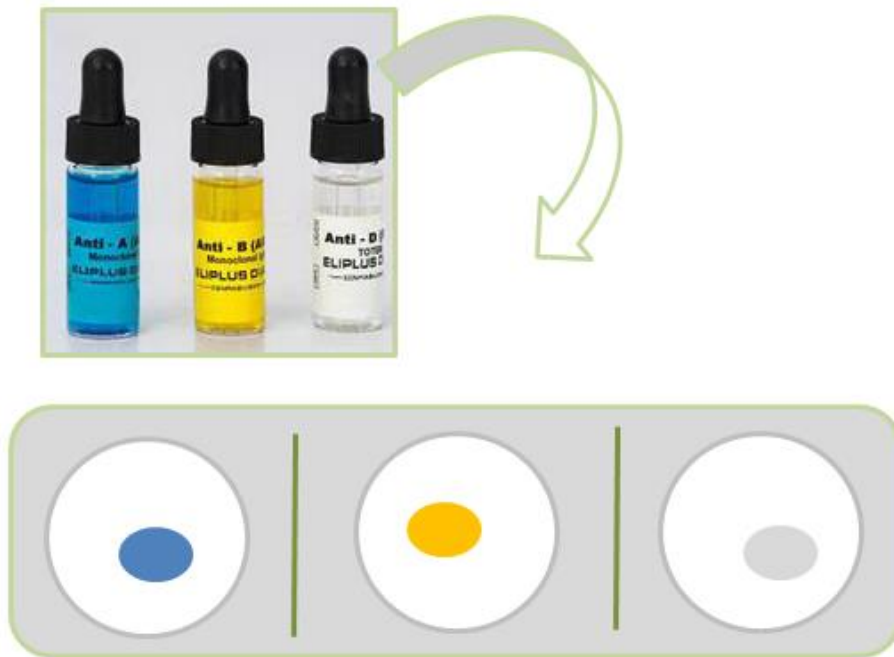
In this section of the practical you will carry out the tile method to determine the ABO and Rh status of 5 unknown patient blood samples. Please note that you will need to use the ABO Blood group interpretation chart contained within these notes.

Method

1. Label a tile card with the patient sample number:



- Place 1 drop of anti-sera (anti A, Anti B and Anti D) respectively onto each area of the card as shown below:




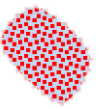

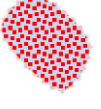



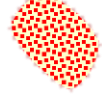





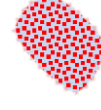


- Place 1 drop of blood (3% concentration) from the same patient onto each of the anti-sera.
- Spread each mixture evenly on the card to cover the circular area
- Leave the test for 2 minutes at room temperature (22°-24°C). Then gently rock slide and look for agglutination.

Results

Record your results in the table below:

Sample ID	Anti A	Anti B	Anti D	Blood Group
1				
2				
3				
4				
5				

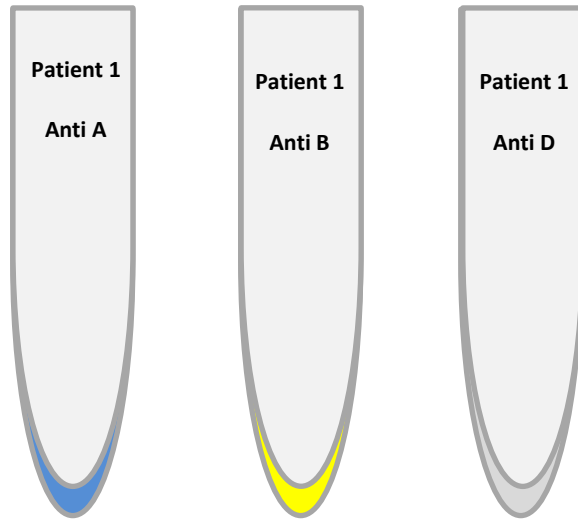
Blood group interpretation chart

<u>Anti A</u>	<u>Anti B</u>	<u>Anti D</u>	<u>Blood Group</u>
			O Rh D Positive
			O Rh D Negative
			A Rh D Positive
			A Rh D Negative
			B Rh D Positive
			B Rh D Negative
			AB Rh D Positive
			AB Rh D Negative

Exercise 2: ABO and Rh D Blood Grouping - Tube Method (30 mins)

Method

1. Label 3 tubes with the sample number and anti A, anti B and anti D.
2. Add one drop of anti-sera to each:



3. Add 1 drop of patient sample blood (3% concentration) into each test tube.
4. Leave the test tubes for 10 minutes at room temperature (22°-24°C).
5. Then gently rock each tube and look for agglutination.

Results

Record your results in the table below:

Sample ID	Anti A	Anti B	Anti D	Blood Group
1				
2				
3				
4				
5				