



General Manual			
Doc no	PRL-GM-001	Revision 0.0	Effective Date:01Sept 2020
Written By: Gugu Ditshego		Reviewed by: Gugu Ditshego	Approved by: Jabulani Kubheka
Date	01Aug 2020	Date:31Aug 2020	Date: 31Aug 2020
	18069 Ngungunyane Street Kwa Thema 1575		
	Tel: 011 737 1045/2518 Fax: 086 604 3815 Email: info@proteuslab.co.za		

General Manual

1.0 Purpose

The SOP describes the procedure for hematological, chemistry and microbiological analysis for manual processes.

2.0 Responsibility

It is the responsibility of the laboratory personnel carrying out the procedure to ensure that all processes are completed both competent and safely.

Blood grouping Procedure

1.0 Purpose

To determine the ABO and Rh grouping of an individual and ensure the reliability of laboratory results.

2.0 Scope

This Standard Operating Procedure provides the method to be followed to process manual ABO and Rh grouping. This procedure describes the method detection of ABO and Rh antigens on the red cell and the reciprocal antibodies in the serum.

3.0 Abbreviation

SOP – Standard Operating Procedure

IQC – Internal Quality Control

ABO – Grouping blood types.

Rh – Rhesus

4.0 Type of sample

- EDTA whole blood (samples should be tested within 7days)
- Blood sample should not be older than 24 hours at room temperature, 7days at 2- 8 °C.

5.0 Quality control

- Known cells are used as IQC samples.
- Antigen reagent should be stored at 2-8°C.

6.0 Procedure

Prepare a 3-5 % suspension of patient cells (1 ml saline + 4 drops of whole blood).

Method for forward group.

1. Label 4 tubes anti A, anti B, anti AB and anti D.
2. Dispense one drop of reagents into each of these tubes.
3. Add one drop of patient's cell suspension to each tube.
4. Centrifuge tubes at 3000 rpm for 1 minute gently suspend the button and examine agglutination and record results on appropriate worksheet.
5. Rh negative reaction must be confirmed under the microscope.

Method for reverse group.

Antibodies in babies under 6 months have not yet developed and reverse is not done.

1. Label 3 tubes A1 cells, A2 cells and B cells.
2. Dispense 2 drops of plasma into the 3 appropriately labeled tubes.
3. Add 2 drops of A1 cells to the first tube, 2 drops of A2 cells to the 2nd tube and 2 drops of B cells to the third tube.
4. Centrifuge for 1 minute at 3000 rpm
5. Gently re suspend cells and examine for agglutination and record results on worksheet.

Example of interpretation

BLOOD GROUP	FORWARD GROUP			REVERSE GROUP	
	ANTI A	ANTI B	ANTI AB	A CELLS	B CELLS
GROUP O	Neg	Neg	Neg	Pos	Pos
GROUP A	Pos	Neg	Pos	Neg	Pos
GROUP B	Neg	Pos	Pos	Pos	Neg
GROUP AB	Pos	Pos	Pos	Neg	Neg

Required equipment and reagents.

- Anti-A, anti-B, anti-AB and D antigen(2-8°C)
- Glass tubes
- Plastics pipettes
- Centrifuge
- Saline

References

PRL-OPM-001

PRL-MAN-001

