

# Separation of Plasma and Serum and Their Proteins from Whole Blood



## Method:

- 1- Place both purple and red cap tubes in the centrifuge machine and run it at *3000 rpm for 10 minutes*, to separate plasma and serum, respectively.
- 2- To separate their proteins follow the scheme below:

### a) Plasma:

**Note:** Measure the volume of the obtained plasma. Then, add the same volume of the saturated salt solution

\_\_\_\_\_ ml Plasma + \_\_\_\_\_ ml saturated NaCl solution

Centrifuge at 3500 rpm /10 min

What will be the precipitated protein\_\_\_\_\_

Dissolve in 2ml 0.9% saline

Biuret test (Tube A)

Clotting Test (Tube B)

1 ml Fibrinogen + 1ml Biuret Reagent

1 ml Fibrinogen + 1ml Serum

Mix well, allow to stand in water bath at 37 °C/10 min

Incubate at water bath at 37 °C / 10 min

Result	
Conclusion	

Result	
Conclusion	

*To Filtrate*

Mention the remaining proteins\_\_\_\_\_

Filtrate + Few drops of 5 % CaCl<sub>2</sub>

Incubate at 37 °C / 10 min

Result	
Conclusion	

**b) Serum:**

**Note:** Measure the volume of the obtained serum. Then, add the same volume of the saturated salt solution

ml serum + 1 ml saturated ammonium sulphate solution

Centrifuge at 3500 rpm /10 min

What will be the precipitated protein\_\_\_\_\_

Dissolve in 2ml 0.9% saline

Result	
Conclusion	

Result	
Conclusion	

**To Filtrate**

Mention the remaining proteins\_\_\_\_\_

Divide the filtrate into 2 tubes

Salting out (Tube A)

Heat Coagulation Test (Tube B)

Add solid ammonium sulphate until albumin is precipitated

Add drops of 2M acetic acid

Heat the content of the tube at 70 °C/10 min

Result	
Conclusion	

Result	
Conclusion	