

Isolation of Blood Immune components

Lecture 6

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Isolation of Immune component

Blood and Serum

Blood is the one of the largest parts of the body which supports the functions of all of the organs .

An average of a person of 70kg has almost 5 Liters blood.

Composition of Blood

1- Formed elements (45%) which include :

A-Red Blood cells, B- White blood cells C-Platelets

2- Plasma (55 %)

Plasma



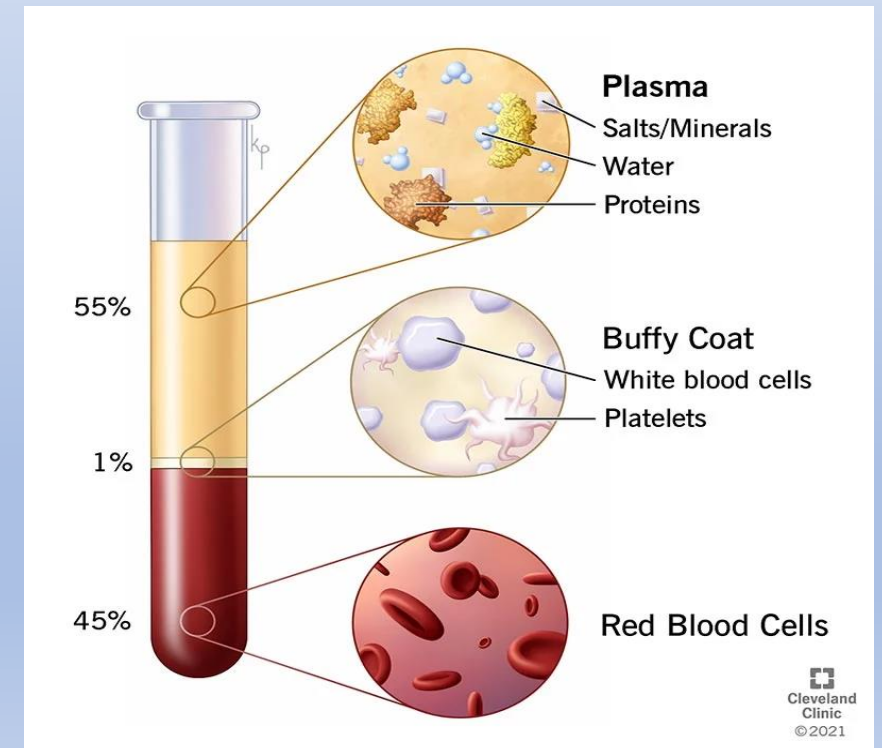
Anticoagulants include

- 1- EDTA (Ethylen Diamine Tetra Acetic acid)
- 2- Heparin
- 3- Citrate

Centrifugation should be refrigerated (4 C) at 1500 xg or 10,000-12,000 RPM for 10

Following Centrifugation immediately , if the plasma is not analyzed immediately, then we should transfer the plasma into refrigerated microcentrifuge pipette and store it on -20 C .

It is important to avoid multiple freeze-thaw cycles

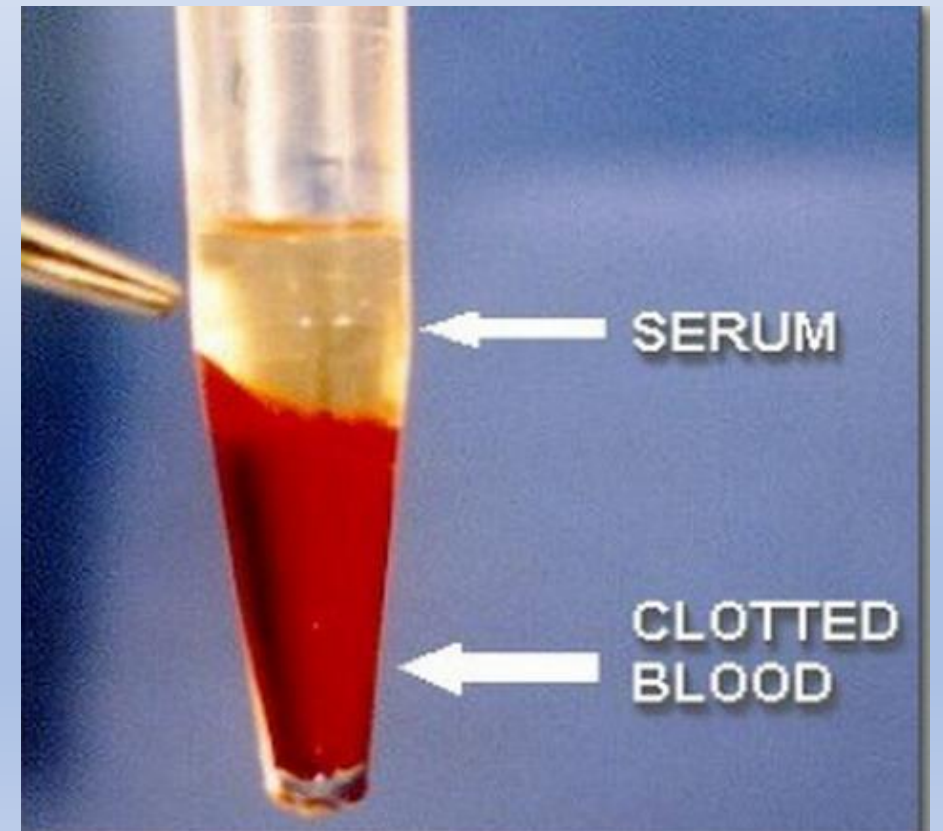


Serum

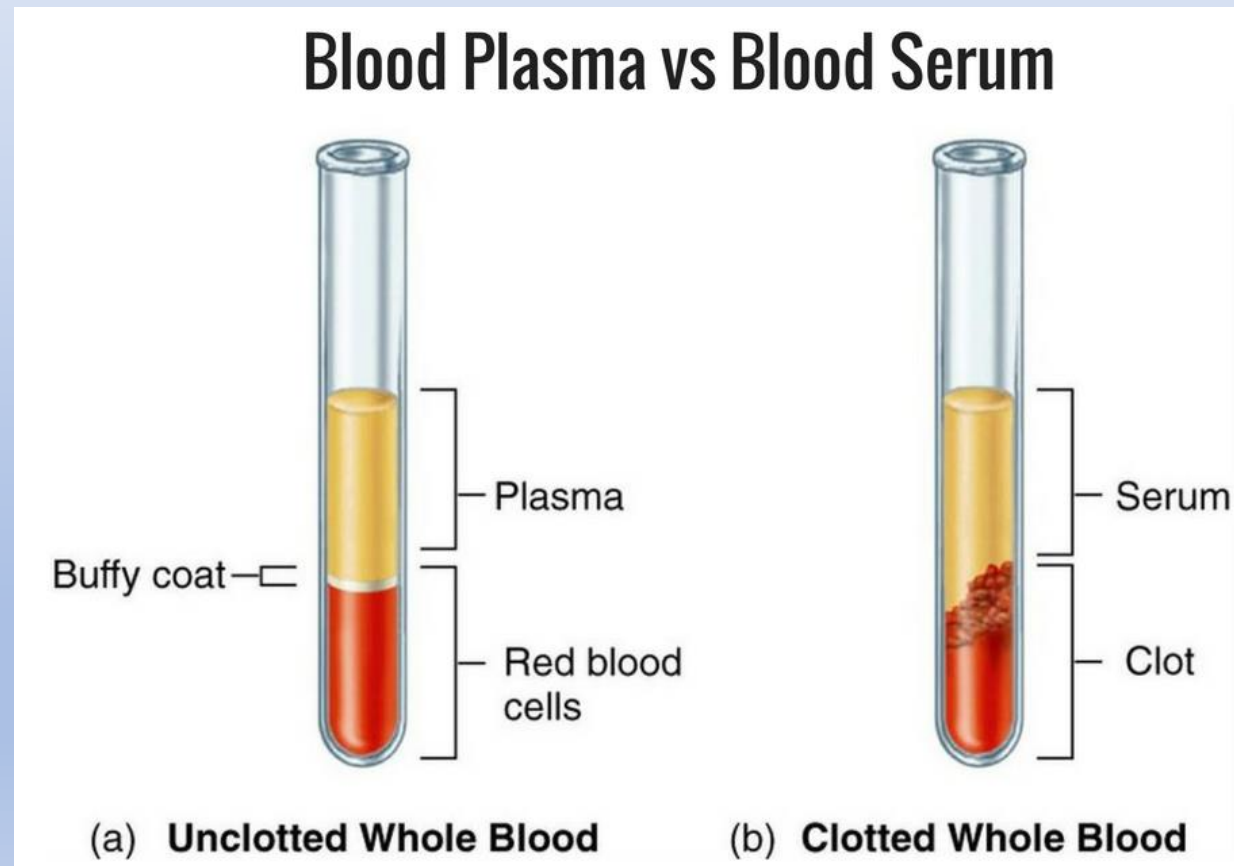


- Allow the blood to clot by usually leaving it at Room Temperature for 30 minutes.
- Remove the clot by centrifugation (10,000-20,000 xg) for 10 minutes in a refrigerated centrifuge.
- Transfer the liquid part (serum) to a clean microcentrifuge tube by using pipette.
- If the serum is not analyzed immediately then we should store it on -20 C .

Also, it is important to avoid freeze/thaw cycles.



Serum and Plasma



Best
Wishes!

The image features the phrase "Best Wishes!" written in a bold, black, cursive script. The text is set against a white, slightly tilted rectangular background. The word "Best" is on the top line, and "Wishes!" is on the bottom line. The letters are thick and have a slight shadow effect. Several small, five-pointed gold stars are scattered around the text, particularly around the word "Best". A long, sweeping, black flourish extends from the bottom of the word "Wishes" across the width of the text.