

Anticoagulants

A substance that prevents coagulation or clotting of blood but does not dissolve an already formed clot is known as anticoagulant. The correct choice and correct amount of anticoagulant is must. The incorrect may lead Detoriation of cells

First anticoagulant was used by Rous and Turner in 1960

Various types of anticoagulant used in labs are as follows

1. EDTA (ethylene diamine tetra acetic acid)
2. Sodium floride
3. Sodium citrate
4. Heparin
5. Double oxalate

EDTA/purple top/lavender top

It is used for routine Hematological work. It has a chelating effect on calcium. Three types of EDTA salts are potassium, sodium, lithium

Uses: it is used_for TLC, DLC, CBC, platelet count, RBC count, HB, ESR(wintrob's method)

Heparin/green top

Heparin is naturally occurring anticoagulant produced by basophills. It acts as anticoagulant preventing the formation of clot. It acts as an anticoagulant preventing the formation of clot

Uses:

ESR(westergren method), meth hb, OFT(osmotic fragility test)

Sodium citrate/sky blue top

It acts by chelating calcium in blood but not as strongly as EDTA. It is in liquid form in the tube and is used for coagulation test as well as in blood transfusion bags

Uses:

Fibrinogen, PT INR, APTT

Sodium fluoride/grey top

It has a double action. It prevents clotting by chelating calcium. It contains an agent(antiglycolytic agent) which stops the metabolism of glucose

Uses:

- 1.It is used for determination of blood glucose level
2. It prevents blood for 24hours at RT and 4,6 days in refrigerator

Double oxalate

It acts by chelating calcium in blood. It contains potassium and Ammonium oxalate in the ratio of 2:3 . Is is also know as potassium and ammonium oxalate