



## E.D.T.A. (di-sodium)5%

R019

EDTA (di-sodium) 5 % is used as an in vitro anticoagulant for diagnostic purposes.

### Composition\*\*

#### Ingredients

E.D.T.A. di-sodium salt	5.000 gm
Distilled water	100.000 ml

\*\*Formula adjusted, standardized to suit performance parameters

### Principle And Interpretation

Ethylene diamine tetraacetic acid is an calcium chelating agent. It has colourless crystalline nature which decomposes at 240°C and is slightly soluble in water and insoluble in common organic solvents. It can be neutralized by alkali-metal hydroxides to form a series of water-soluble salts containing one to four alkali metal cations. It has many uses and applications in various aspects. In the biological field, it is mainly used as an anticoagulant of blood, where the calcium in blood is bound in an unionized and soluble complex with EDTA.

Ethylenediamine tetraacetic acid (EDTA) is a polyprotic acid containing four carboxylic acid groups and two amine groups with lone-pair electrons that chelate calcium and several other metal ions. Calcium is necessary for a wide range of enzyme reactions of the coagulation cascade and its removal irreversibly prevents blood clotting within the collection tube. Historically, EDTA has been recommended as the anticoagulant of choice for hematological testing because it allows the best preservation of cellular components and morphology of blood cells

### Quality Control

#### Appearance

Colourless liquid.

#### Solubility

Slightly soluble in water and insoluble in common organic solvents.

#### Clarity

Clear with no insoluble particles.

#### Concentration

4.80- 5.20

### Storage and Shelf Life

Store at 10-30°C in tightly closed container. Use before expiry period on the label.

### Reference

Banfi G1, Salvagno GL, Lippi G, "The role of ethylenediamine tetraacetic acid (EDTA) as in vitro anticoagulant for diagnostic purposes"; Clin Chem Lab Med. 2007;45(5):565-76.

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