# HEPARIN SODIUM

**Description:**

Heparin is a glycosaminoglycan with anticoagulant activity. It is a heterogeneous mixture of variably sulphated polysaccharide chains composed of repeating units of D-glucosamine and either L-iduronic acid or D-glucuronic acids. It is biosynthesized and stored in the mast cells of various animal tissues, particularly liver, lung or gut.Heparin is normally isolated from beef lung or pork intestinal mucosa.

**Application:**

Heparin acts as an anticoagulant, preventing the formation of clots and extension of existing clots within the blood. While heparin does not break down clots that have already formed, it allows body's natural clot lysis mechanisms to work normally to break down clots that have formed. Heparin is generally used for anticoagulation for the following conditions:

- Acute coronary syndrome, e.g. NSTEMI
- Atrial fibrillation
- Deep-vein thrombosis and pulmonary embolism
- Cardiopulmonary bi-pass for heart surgery
- ECMO circuit for extracorporeal life support
- Haemofiltration

**MW:** 6,000 to 30,000 Daltons

**Unit Definition:**

The potency of Heparin sodium calculated on the dried basis is NLT 180 USP Heparin units per mg.

The estimated ratio of anti-factor Xa activity to anti-factor IIa activity is between 0.9 and 1.1 .

**Available form:**

Powder form confirming to USP specifications.

**Solubility:**

Freely soluble in water.

**Stability and Storage:**

Stable for 3 years at $25^0$ C in sealed tamper proof containers.

**Reference:**

1. Molecular cellular biochemistry, 48(3), 161-168, (1982).
2. J. Biol. Chem., 254, 2902-2913, (1979).
3. J. Biol. Chem., 261, 7372-7379.