



Fondaparinux Sodium PRODUCT DATA SHEET

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Product Name:	Fondaparinux Sodium
Product Number:	F044
CAS Number:	114870-03-0
Molecular Formula:	$C_{31}H_{43}N_3O_{49}S_8 \cdot 10Na$
Molecular Weight:	1728.08
Form:	Powder
Appearance:	White to off-white powder
Solubility:	Sparingly soluble in water. Insoluble in ethanol.
Source:	Synthetic
Storage Conditions:	-20°C
Description:	<p>Fondaparinux Sodium is the sodium salt of Fondaparinux, a synthetic sulfated pentasaccharide antithrombotic anticoagulant. It has 5 monomeric sugar units that are identical to the those isolated after cleavage of the polymeric glycosaminoglycan heparin. The sequence in heparin is thought to form the binding site for the natural anti-coagulant factor antithrombin III (ATIII) as binding to this site increases the anti-coagulant activity of ATIII by a factor of 1000-fold. Fondaparinux Sodium is a Factor Xa inhibitor. The compound is sparingly soluble in water.</p>
Mechanism of Action:	<p>Fondaparinux Sodium binds antithrombin and induces a conformational change in antithrombin. It inhibits Factor Xa which is the activated form of the coagulation factor thrombokinase (Stuart-Prower factor). By binding to this site, it accelerates the rate at which antithrombin (ATIII) neutralizes Factor Xa. Neutralization of Factor Xa decreases conversion of prothrombin to thrombin. Disruption of the coagulation cascade prevents thrombin formation.</p>
References:	<p>Ben-Hadj-Khalifa S (2011) Differential coagulation inhibitory effect of fondaparinux, enoxaparin and unfractionated heparin in cell models of thrombin generation. Blood Coagul.Fibrinolysis.22(5):369-373 PMID 21577096</p> <p>Fu L, Suflita M, and Linhardt RJ (2016) Bioengineered heparins and heparan sulfates. Adv. Drug Deliv. Rev. 97:237-249 PMID 26555370</p> <p>Frank RD (2005) The synthetic pentasaccharide Fondaparinux reduces coagulation, inflammation and neutrophil accumulation in kidney ischemia-reperfusion injury. J.Thromb. Haemost. 2005 3(3):531-540</p> <p>Herbert M et al (1997) SR 90107A/Org 31540, a novel anti-factor Xa antithrombotic agent. Cardiovasc. Drug Rev. 15(1):1-26</p>

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