

## Heparin Sodium from Bovine Lung

**Catalog Number:** C-HEPBL-100MG  
 C-HEPBL-250MG

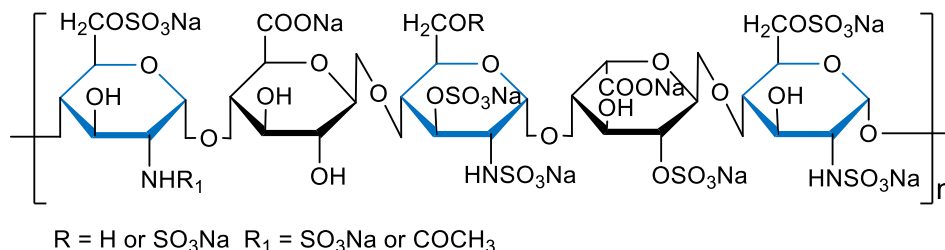
**Quantity:** 100 mg  
 Quantity: 250 mg

**Synonyms:** Unfractionated heparin, Sodium heparin, Heparin sodium

**CAS Number:** 9041-08-1

**Source:** Bovine lung

**Product Description:** Heparin sodium is a kind of natural anticoagulant obtained from porcine intestinal mucosa or bovine lung widely used for biochemical and biological researches. It is a highly sulfated glycosaminoglycan with a backbone composed of disaccharide repeating units, which are D-glucosamine (GlcN)/L-iduronic acid (IdoA) and GlcN/D-glucuronic acid (GlcA). These residues can be sulfated at different positions. Heparin can bind to a variety of proteins, including growth factors, pro-inflammatory chemokines and cytokines, to exert its biological functions<sup>1-3</sup>.



### Specifications:

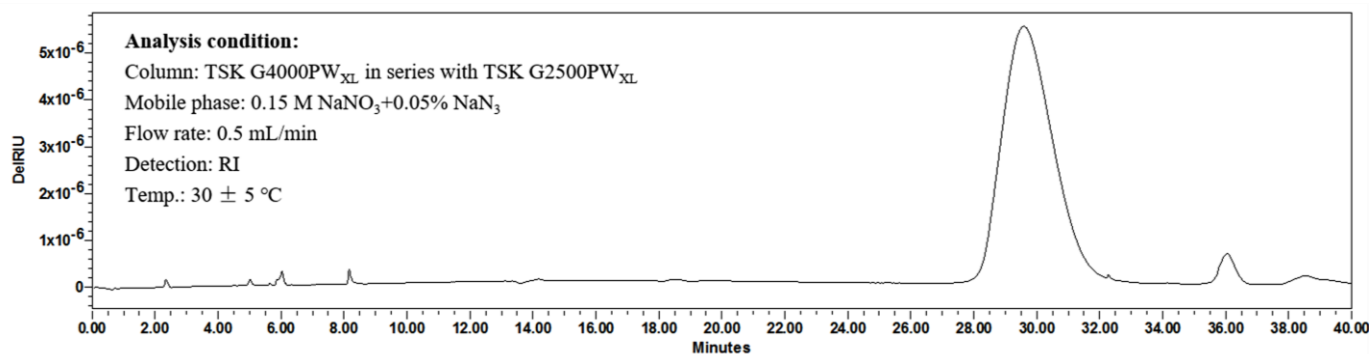
Sulfur content	11-14%	BaCl <sub>2</sub> -gelatin assay <sup>4</sup>
Purity	>98%	High-performance gel permeation chromatography (HPGPC)
Uronic acid	17-21%	<i>m</i> -hydroxydiphenyl method <sup>5</sup>
Average Molecular Weight (M <sub>w</sub> , Da)	~11,000-16,000	HPGPC-MALLS
Structure Analysis	Pass	<sup>1</sup> H- and <sup>13</sup> C-NMR spectra
Solubility, 50 mg/mL, H <sub>2</sub> O	Clear, Colorless to faint yellow	
Appearance	White to off white powder	

**Storage/Stability:** Store at room temperature in a dry and dark place until opened. Following reconstitution, aliquot and freeze at -20°C to -80°C for long-term storage or refrigerate at 2°C - 8°C for short-term storage.

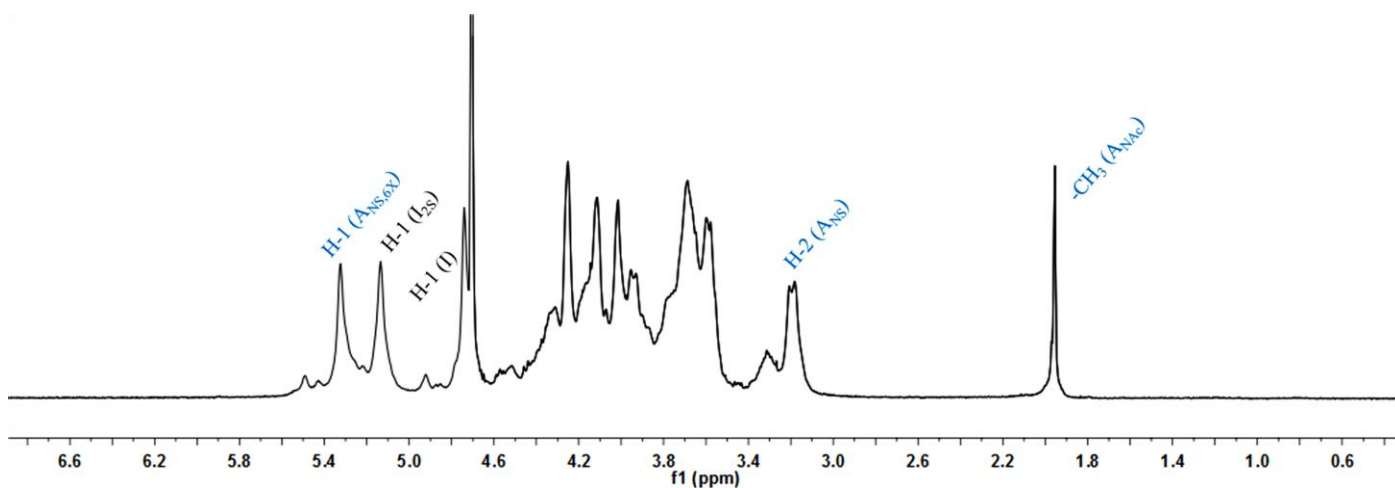
### Related Products:

Product	Catalog Number
Heparin Sodium from Porcine Intestinal Mucosa	C-HEPPIM
Completely Desulfated Heparin	C-CDSHEP
2-O-Desulfated Heparin	C-2ODSHEP
6-O-Desulfated Heparin	C-6ODSHEP
<i>N</i> -Desulfated Heparin	C-NDSHEP
Completely Desulfated re <i>N</i> -Sulfated Heparin	C-CDSRNSHEP

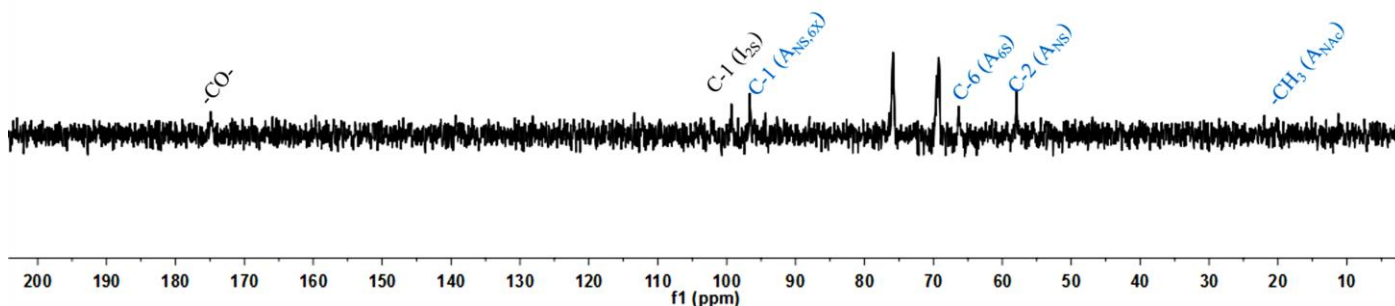
1. The purity analysis of heparin sodium from bovine lung



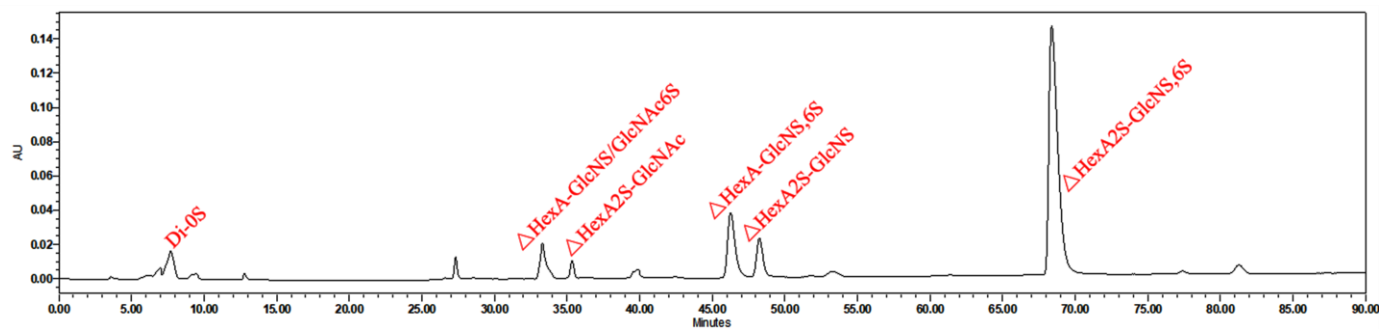
2. The <sup>1</sup>H-NMR spectrum of heparin sodium from bovine lung<sup>6</sup>



3. The <sup>13</sup>C-NMR spectrum of heparin sodium from bovine lung<sup>7</sup>



#### 4. Unsaturated disaccharide analysis by SAX-HPLC



#### References:

1. Gordon, M.Y., *et al.* *Nature*. **326**(6111): p. 403-5(1987).
2. Roberts, R., *et al.* *Nature*. **332**(6162): p. 376-8(1988).
3. Lyon, M., *et al.* *J Biol Chem*. **269**(15): p. 11216-23(1994).
4. Dodgson, K.S. and R.G. Price. *Biochem J*. **84**(1): p. 106(1962).
5. Blumenkrantz, N. and G. Asboehansen. *Analytical Biochemistry*. **54**(2): p. 484(1973).
6. Guerrini, M., A. Bisio, and G. Torri. *Seminars in Thrombosis & Hemostasis*. **27**(5): p. 473(2001).
7. Yates, E.A., *et al.* *Carbohydrate Research*. **294**(294): p. 15(1996).