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## Product Data Sheet

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Product Name: Pentosan Polysulfate Sodium (W/W 43%)

Cat. No.: GC61171

### Chemical Properties

Cas. No. 140207-93-8

SMILES [Pentosan Polysulfate (Sodium)]

Formula M.Wt 4000-6000

Solubility Storage 4°C, sealed storage, away from moisture

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

### Background

Pentosan Polysulfate Sodium is an orally bioavailable, semi-synthetic medication with anti-inflammatory and pro-chondrogenic properties. Pentosan Polysulfate Sodium also is a potent and selective anti-HIV agent. Pentosan Polysulfate Sodium is used for the treatment of interstitial cystitis[1][2][3].

Pentosan Polysulfate Sodium has been shown to inhibit HIV-1 activity with an ED50 of 0.19 µg/mL in MT-4 cells. It inhibits HIV-1 antigen expression in HUT-78 cells at an ED50 of 0.02 µg/mL, and complete inhibition of HIV-1 antigen expression is obtained at a concentration of 4.0 µg/mL[2]. Pentosan Polysulfate Sodium suppresses NF-κB, decreases the proinflammatory actions of TNFα, and decreases high glucose and advanced glycation end products (AGEs) stimulated MCP-1 production[3].

Pentosan Polysulfate Sodium has been shown to decrease interstitial inflammation and glomerulosclerosis in 5/6 nephrectomized rats. Pentosan polysulfate treatment preserves renal function, significantly reduces albuminuria, and markedly decreases the severity of renal lesions, including tubulointerstitial inflammation. Pentosan Polysulfate Sodium also reduces upregulation of TNFα and proinflammatory genes in aging diabetic

**Caution: Product has not been fully validated for medical applications. For research use only.**

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kidneys[3].

[1]. Schuchman EH, et al. Pentosan polysulfate: a novel therapy for the mucopolysaccharidoses. PLoS One. 2013;8(1):e54459. [2]. Baba M, et al. Pentosan polysulfate, a sulfated oligosaccharide, is a potent and selective anti-HIV agent in vitro. Antiviral Res. 1988 Sep;9(6):335-43. [3]. Wu J, et al. Inhibition of inflammation by pentosan polysulfate impedes the development and progression of severe diabetic nephropathy in aging C57B6 mice. Lab Invest. 2011 Oct;91(10):1459-71.

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