PPS

Pentosan Polysulphate Sodium

Approved for the treatment of Interstitial cystitis (Painful bladder syndrome) by USFDA

MOLECULAR RANGE 4000 to 6500

CAS NO 116001-96-8

PRODUCT DESCRIPTION

Pentosan Polysulphate Sodium is made possible by considering the interactions with heparin sulphate chains attached to the protein core of proteoglycans receptors on the cell surfaces and in the extracellular matrix.

Heparin sulphate is a glycosaminoglycan and is known to be ubiquitous at human cell surfaces, it is generally more abundant than most receptors .

The heparin-binding model is the common denominator, which links the varied activities of PPS (Pentosan Polysulphate Sodium). For example it is known that heparin sulphate acts as a viral receptor, and that prions enter the cells in part due to their affinity to heparin receptors . It is also known that heparin binds to heparin sulphate glycosaminoglycans on the cell surface to block cell signalling induced by these factors, thus reducing the ultimate biological reactions.

CHEMICAL PROPERTIES AND CHEMICAL STRUCTURE

The drug substance is a natural polysaccharide, xylan from beechwood esterified with sulphonic acid. PPS (Pentosan Polysulphate Sodium) belongs to the polyanions having a high electric charge density. The basic structure of this macromolecule consists of pentoses, i.e. (1 4) linked beta-D-xylopyranose units containing glucuronic acid groups at statistically every 10th unit.

THERAPEUTICAL PROPERTIES

The manifold therapeutical effects of PPS (Pentosan Polysulphate Sodium) are made possible by considering its relationship to glycosaminoglycans, which are known to be ubiquitous at human cell surfaces.

RESEARCH AREAS

Many studies had been undergone and proved for below given ailments like Cerebral ischemia, Myocardial ischemia, Thrombolytic and anti-coagulant, Prion disease, Ophthalmological diseases, Further properties of PPS (Pentosan Polysulphate Sodium) have been demonstrated in studies demonstrating anti-inflammatory, antiviral, and anticarcinogenic effects, antihistamine activity, and inhibition of elastase. The antithrombotic effects of PPS (Pentosan Polysulphate Sodium) are based on effects on platelet function, anticoagulant effects, and fibrinolytic effects.

THERAPY AREAS

FIELDS OF APPLICATIONS

Arteriosclerotic diseases

PPS (PentosanPolysulphate Sodium) has been marketed for over fifty years for the treatment of subacute or chronic arteriosclerotic and thrombotic vascular diseases and as follow-up treatment after injection therapy for acute situations and prophylaxis

Urological disorders

Painful bladder syndrome or interstitial cystitis is a clinical syndrome of urinary urgency, frequency, and bladder or other pelvic pain in the absence of bacterial infection. It's a multi-factorial disease, best viewed as a continuum that may extend across years of a patient's life. Symptoms of interstitial cystitis develop gradually and progressively to the classical triad of pain, urgency, and frequency, until a stable plateau of severity is reached. Aetiologically there is evidence that interstitial cystitis is based on a damaged glycosaminoglycans (GAG) layer lining the urothelium. Pentosan polysulphate binds to and resembles the endogeneous glycosaminoglycans which adhere to the bladder epithelium in preclinical models. In this way it acts as a buffer to control cell permeability, thus preventing toxins and other irritating solutions in the urine from reaching the uroepithelium. Pentosan Polysulphate has been shown to reduce inflammation associated with interstitial cystitis by inhibiting the inflammatory response and reducing the secretion of histamines.

Pentosan Polysulphate Sodium is the first and only oral medication that's been approved by the FDA for treating the pain or discomfort of interstitial cystitis.

Osteoarthritis in Veterinary Medicine

Pentosan Polysulphate Sodium is also a veterinary medicine. The therapeutic activity of the product arises from the action of Pentosan Polysulphate Sodium on the underlying pathological processes of osteoarthritis and results in analgesic and regenerative effects. Also it is indicated for the treatment of lameness and the pain of osteoarthritis (non-infectious arthrosis) and related musculoskeletal disorders in dogs. Stimulate chondrocytes which synthesize the cartilage matrix.

DOCUMENTATION DMF, C.O.A with all details available.

STORAGE Keep in a well closed air tight container, protect from light and place it in a cool dry place.

PRESENTATION Available as per consumer requirements in various packing.

For your requirement contact:

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