Patent Documents

[0005]

Patent Document 1: International Publication No. WO 2010/000013

Patent Document 2: International Publication No. WO 2014/114723

Non-Patent Documents

[0006]

Non-Patent Document 1: CMC Publishing Co., Ltd., "*Wood Chemicals no Gijyutsu* (Techniques of Wood Chemicals)," first edition issued in 2007, p. 108

Summary

[0006a]

In one aspect, the present disclosure refers to a hardwood-derived pentosan polysulfate having a weight average molecular weight of 5000 or less and a content of acetyl groups of 0% to 0.3% by mass, or a pharmaceutically acceptable salt thereof, or a pharmaceutically acceptable solvate thereof.

[0006b]

In another aspect, the present disclosure refers to a pharmaceutical composition comprising, as an active ingredient, the pentosan polysulfate disclosed herein, or a pharmaceutically acceptable salt thereof, or a pharmaceutically acceptable solvate thereof.

[0006c]

In a further aspect, the present disclosure refers to an anticoagulant comprising, as an active ingredient, the pentosan polysulfate disclosed herein, or a pharmaceutically acceptable salt thereof, or a pharmaceutically acceptable solvate thereof.

Problem to be Solved by the Invention

[0007]

It is a problem of the present invention to provide pentosan sulfate having an activity that is preferable for medical use.

Means for Solving the Problem

[0008]

The present inventors have found that pentosan polysulfate having a low weight average molecular weight and a low content of acetyl groups has an Xa inhibitory activity and/or an anti-Xa/anti-IIa activity ratio that are higher than those of conventionally known pentosan polysulfate. The present inventors have completed the present invention based on these findings.

Specifically, the present invention has the following configuration.

[0009]

[1] Pentosan polysulfate having a weight average molecular weight of 5000 or less and a content of acetyl groups of 0% to 2.0% by mass, or a pharmaceutically acceptable salt thereof, or a pharmaceutically acceptable solvate thereof.

[2] The pentosan polysulfate according to [1], which has a content of acetyl groups of 0% to 0.3% by mass, or a pharmaceutically acceptable salt thereof, or a pharmaceutically acceptable solvate thereof.

[3] The pentosan polysulfate according to [1] or [2], which has a weight average molecular weight of 4000 or less, or a pharmaceutically acceptable salt thereof, or a pharmaceutically acceptable solvate thereof.

[4] The pentosan polysulfate according to any one of [1] to [3], which has a structure represented by the following formula, a pharmaceutically acceptable salt thereof, or a