Product Data Sheet

Product Name: Xylan
Cat. No.: GC30220

Chemical Properties

Cas. No.	9014-63-5		
SMILES	[Xylan]		
Formula		M.Wt	
Solubility	DMSO : 100 mg/mL ;Water : ≥ 33.33 mg/mL	Storage	Store at -20°C
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			

Xylan

Protocol

Product Data Sheet

Kinase experiment: Arabinoglucuronoxylan (AGX) is extracted and purified from Norway spruce (Picea abies) secondary cell walls using two complementary processes: (i) alkali extraction after delignification (AGX-A) and (ii) subcritical water extraction and enzymatic purification (AGX-H). The monosaccharide composition of the Xylan is analyzed after acid methanolysis (1 M TFA, 3h, 100°C) and high-pH anion-exchange chromatography with pulsed amperometric detection[1].

References:

[1]. Martinez-Abad A, et al. Regular Motifs in Xylan Modulate Molecular Flexibility and Interactions with Cellulose Surfaces. Plant Physiol. 2017 Oct 25. pii: pp.01184.2017.

Background

Xylan represents the main hemicellulose component in the secondary plant cell walls of flowering plants. Xylan is a polysaccharide made from units of xylose and contains predominantly β-D-xylose units linked as in cellulose.

Two different Xylan fractions are extracted from spruce wood using an alkaline process (AGX-A) and a hydrothermal process by subcritical water (AGX-H). AGX-A shows lower relative glucuronation and higher arabinosylation compare with AGX-H. These differences in substitution may arise from the different extractability of distinct Xylan populations in softwoods or be induced by the extraction process. mGlcA substitutions do not affect significantly the conformational space of the Xylan backbone, neither in their protonated nor deprotonated state[1].

[1]. Martinez-Abad A, et al. Regular Motifs in Xylan Modulate Molecular Flexibility and Interactions with Cellulose Surfaces. Plant Physiol. 2017 Oct 25. pii: pp.01184.2017.