Graphical Abstracts

Influence of functional groups on the in vitro anticoagulant activity of chitosan sulfate

Carbohydr. Res. 2003, 338, 483

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Chitosan sulfate from chitosan was chemically modified to get propanoylated, hexanoylated or quarternized derivatives. The influences of these groups on the anticoagulant activity are discussed.

Synthesis, intramolecular migrations and enzymic hydrolysis of partially pivaloylated methyl α-D-mannopyranosides

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A practical synthesis of a $(1 \rightarrow 6)$ -linked β -D-glucosamine nonasaccharide

Carbohydr. Res. 2003, 338, 495

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First total synthesis of α - $(2 \rightarrow 3)/\alpha$ - $(2 \rightarrow 6)$ -disialyl lactotetraosyl ceramide and disialyl Lewis A ganglioside as cancer-associated carbohydrate antigens

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Carbohydr. Res. 2003, 338, 515

New polygalacturonases from *Trichoderma reesei*: characterization and their specificities to partially methylated and acetylated pectins

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Two extracellular isoenzymes of polygalacturonases PG1 and PG2 were isolated from 3-day-old culture filtrates of *Trichoderma reesei*. The two enzymes were purified to homogeneity by ion-exchange, gel filtration and hydrophobic interaction chromatographies.

Isolation and characterization of *O*-acetylated glucomannans from aspen and birch wood

Carbohydr. Res. 2003, 338, 525

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$$\rightarrow 4)-\beta-D-Manp-(1\rightarrow 4)-\beta-D-Glcp-(1\rightarrow 4)-\beta-D-Manp-(1\rightarrow 4)-\beta-D-Manp-(1\rightarrow 4)-\beta-D-Glcp-(1\rightarrow 4)-\beta-D-Manp-(1\rightarrow 4)-\beta-D-Man$$

Study on lyotropic liquid-crystalline properties of trimethylsilyl hydroxypropylcellulose

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The liquid crystalline nature of TMS-HPC/acetone solution was confirmed by PLM and the mechanism of liquid crystallization was studied by FTIR and WAXD methods.

$$\begin{array}{c|c} & \text{CH}_2\text{O}(\text{CH}_2\text{CH}(\text{CH}_3)} \overset{\bullet}{Q}_X^{\mathsf{TMS}} & \text{R: H or } -\text{CH}_2\text{CH}(\text{CH}_3)\text{O-H}} \\ & \text{or } \cdot \left(\text{CH}_2\text{CH}(\text{CH}_3)\text{O}\right)_X^{\mathsf{TMS}} \\ & \text{of } \cdot \left(\text{CH}_2\text{CH}(\text{CH}_3)\text{O}\right)_X^{\mathsf{TMS}} \\ & \text{of } \cdot \left(\text{CH}_2\text{CH}(\text{CH}_3)\text{O}\right)_X^{\mathsf{TMS}} \\ \end{array}$$

Microscopy and calorimetry as complementary techniques to analyze sugar crystallization from amorphous systems

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Polarized light videomicroscopy (PLV) allowed detecting morphological aspects and the growth of sugar crystals at an earlier stage than did differential scanning calorimetry (DSC). DSC gave a precise account of massive crystallization onset in amorphous systems. PLV analysis of a large number of samples showed similar temperature dependence to that from the DSC data.

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Carbohydr. Res. 2003, 338, 549

Synthesis of 2,3,4,5-tetra-O-methyl-D-glucono-1,6lactone as a monomer for the preparation of copolyesters

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Chemical modification of chitosan. Part 15: Synthesis of novel chitosan derivatives by substitution of hydrophilic amine using N-carboxyethylchitosan

Carbohydr. Res. 2003, 338, 557

ethyl ester as an intermediate Hitoshi Sashiwa, a Norioki Kawasaki, Atsuyoshi Nakayama, Einosuke Muraki, Hirofumi Yajima, b Naoki Yamamori, Yoshifumi Ichinose, Junzo Sunamoto, Sei-ichi Aiba

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X=OH, OEt, or NH-R

Stereospecific synthesis of chiral caprolactone monomers from D-glucose

Carbohydr. Res. 2003, 338, 563

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D-glucose
$$\rightarrow$$
HO
O
O
7
HO
O
N
HO
O
N
H
O
N
8

The O-specific chain structure of the major component

Carbohydr. Res. 2003, 338, 567

from the lipopolysaccharide fraction of *Halomonas magadii* strain 21 MI (NCIMB 13595)

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Effect of chlorhexidine on molecular weight distribution of fructans produced by fructosyltransferase in solution and immobilized on surface

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Chlorhexidine alters the molecular weight distribution of fructans synthesized by cell-free fructosyltransferase.