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Carbohydrate
RESEARCH

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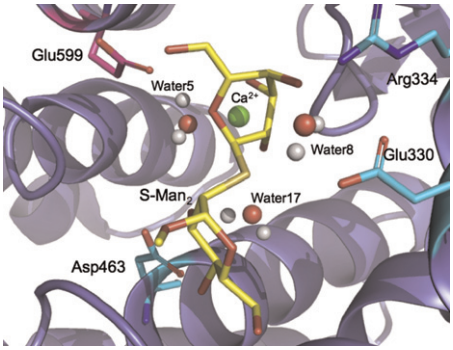
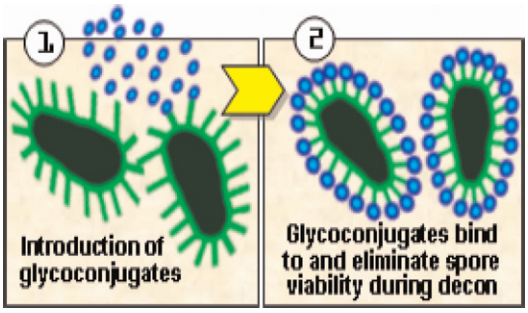
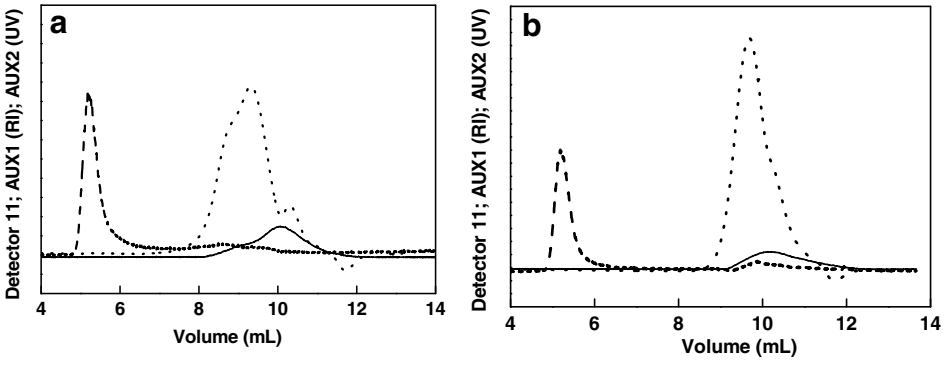
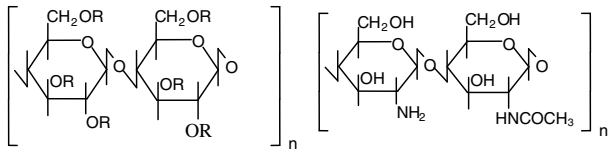




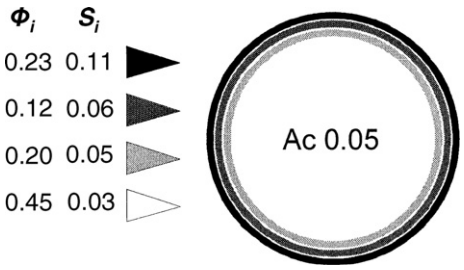


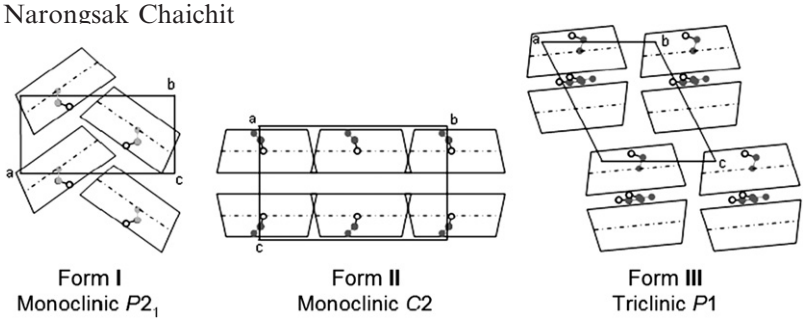
→6)-β-D-Glc*p*-(1→6)-α-D-Man*p*-(1→6)-α-D-Glc*p*-(1→
4
↑
1
α-D-Gal*p*



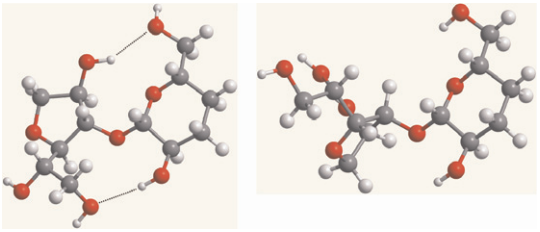
HEC: R= H or -CH_2CH_2OH
HPC: R= H or -$CH_2CH(OH)CH_3$ **Chitosan**

Calculation of several parameters (K; a; K_θ; α; B; and $[\eta]M_v$) for three polysaccharides using: (1) $[\eta] = K \cdot M_v^a$; (2) $[\eta] = K_\theta \cdot M^{1/2}\alpha^3$; (3) $[\eta] = K_\theta \cdot M_v^{0.5} + 0.51 \cdot B \cdot M_v$.

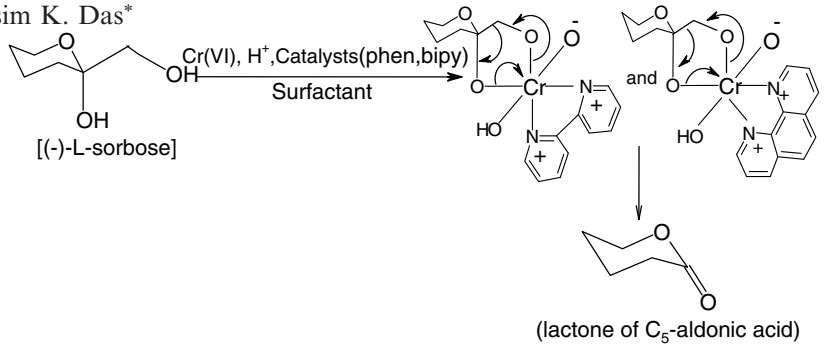




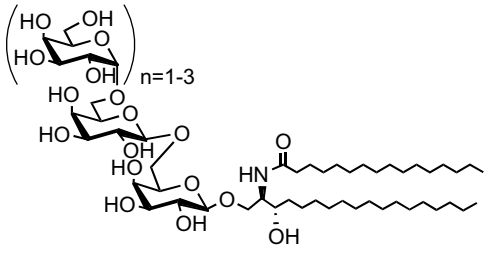
Pseudopolymorphism in the β-CD–EtOH inclusion complex is depicted as a distinction in crystal packing modes.

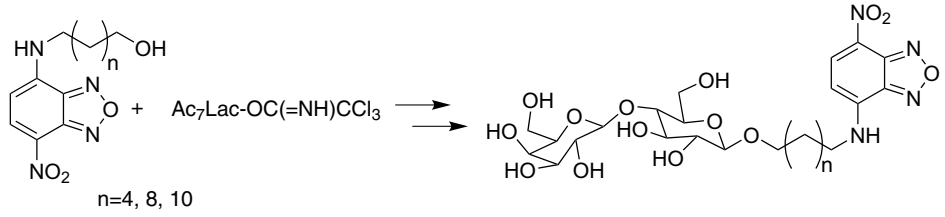


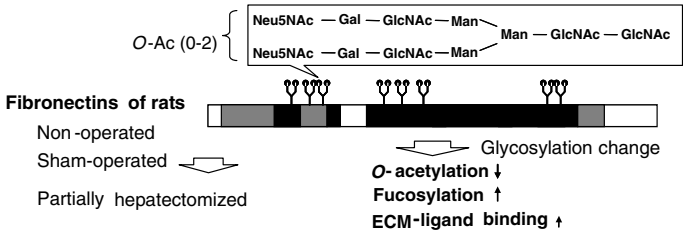
The X-ray diffraction analysis, ^{13}C CP MAS NMR spectra and powder X-ray diffraction patterns were obtained for selected methyl glycosides: α- and β-D-lyxopyranosides (**1**, **2**), α- and β-L-arabinopyranosides (**3**, **4**), α- and β-D-xylopyranosides (**5**, **6**) and β-D-ribopyranoside (**7**), and the results were confirmed by GIAO DFT calculations of shielding constants. The powder X-ray diffraction (PXRD) performed for **4**, **5** and **7** revealed that the sample of **7** existed as a mixture of two polymorphs, and one of them probably consisted of two non-equivalent molecules.

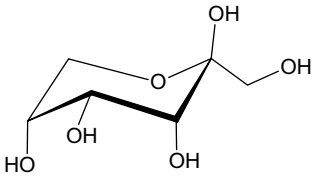


NOTES









*Corresponding author
ⓘ+ Supplementary data available via ScienceDirect

COVER

The graphic represents a molecular dynamics simulation of water density around the disaccharide α-D-Ara*f*-(1→5)-α-D-Ara*f*-OCH_3, highlighting the interglycosidic linkage. The red clouds represent regions where the probability of finding an oxygen atom is high while the gray clouds are for hydrogen atoms. This work is the result of a collaboration in the Alberta Ingenuity Centre for Carbohydrate Science and Department of Chemistry at the University of Alberta between the groups of Pierre-Nicolas Roy and Todd L. Lowary (Castillo, N.; Roy, P. N.; Lowary, T. L. Manuscript in Preparation).

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