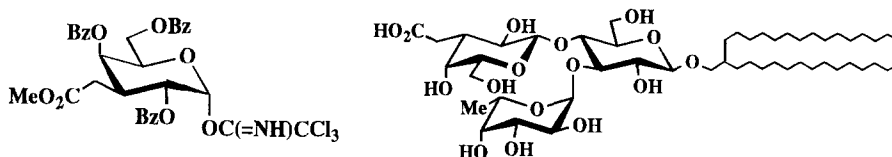


Synthesis of the 3'-C-carboxymethyl Lewis X derivative: a novel selectin blocker

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Phase equilibria of D-glucose and sucrose in mixed solvent mixtures: Comparison of UNIQUAC-based models

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Various UNIQUAC-based procedures were applied to ternary sucrose-mixed solvent mixtures. A modified UNIQUAC model was able to describe the ternary solubility data of D-glucose and sucrose in mixed solvents.

Effects of oxygen-derived free radicals on the molecular weight and the polydispersity of hyaluronan solutions

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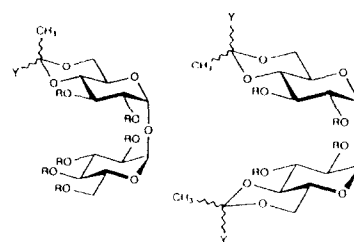
Depolymerization studies on sodium hyaluronate by superoxide anions and hydroxyl free radicals indicate similar modes of action for both species.

The introduction of an hydrophobic chain on α,α -trehalose via the synthesis of acetals. The detergent properties of these derivatives

Jacques Besson, Catherine Fayet, Jacques Gelas *

École Nationale Supérieure de Chimie de Clermont-Ferrand, Ensemble Scientifique des Cèzeaux, BP 187, F-63174 Aubière, France

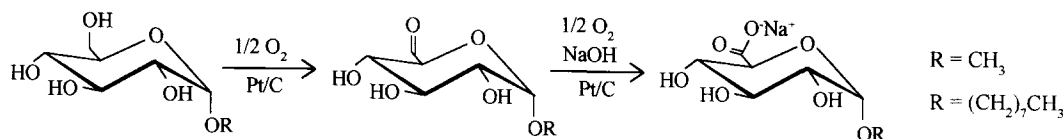
Synthesis and properties of α,α -trehalose mono- and di-acetals. R = H, Ac; Y = (CH₂)_n-CH₃, n = 4, 10.



Oxidation of methyl and *n*-octyl α -D-glucopyranoside over graphite-supported platinum catalysts: effect of the alkyl substituent on activity and selectivity

Johannes H. Vleeming, Ben F.M. Kuster *, Guy B. Marin

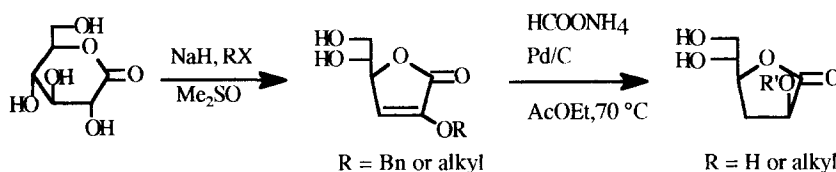
Laboratorium voor Chemische Technologie, Schuit Institute of Catalysis, Eindhoven University of Technology, PO Box 513, 5600 MB Eindhoven, The Netherlands



A two step synthesis of 3-deoxy-D- or L-glycono-1,4-lactones and 2-O-alkyl-3-deoxy-D-glycono-1,4-lactones from D- or L-glyconolactones

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Water diffusion in glasses of carbohydrates

R. Hans Tromp *, Roger Parker, Stephen G. Ring

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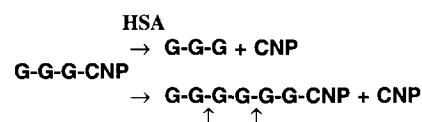
Diffusion constants of water were determined at various temperatures, contents and molecular weights in glassy systems of dried glucose syrups and maltose, with H₂O contents of 3–10% (w/w). Diffusion constants were determined from rate of desorption under reduced pressure. Initial desorption is diffusion controlled under sufficiently reduced pressures. Water diffusion was found to be an activated process, with activation energy independent of mean molecular weight and H₂O content of the carbohydrate matrix. Diffusion in oligomeric chain matrices of glucose syrups is faster than in maltose matrices of equal H₂O content. Using an Eyring model, this is due to longer jump distances in the activated process in less densely packed systems of relatively long oligomeric chains. A strong dependence of the jump distance on H₂O content was found.

Study of the action of human salivary alpha-amylase on 2-chloro-4-nitrophenyl α -maltotrioside in the presence of potassium thiocyanate

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Alpha-releasing amylase degraded the title substrate preferentially CNP by a pathway involving transglycosylation besides direct hydrolysis in the presence of KSCN.



Preparation and complexation ability of zwitterionic derivatives of cyclodextrins

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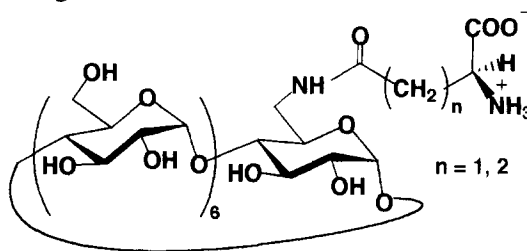
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Zwitterionic derivatives of cyclodextrins exhibited high solubilities in water and were used to form soluble inclusion complexes of 5-fluorouracil.



A new family of oligosaccharides from the xyloglucon of *Hymenaea courbaril* L. (Leguminosae) cotyledons

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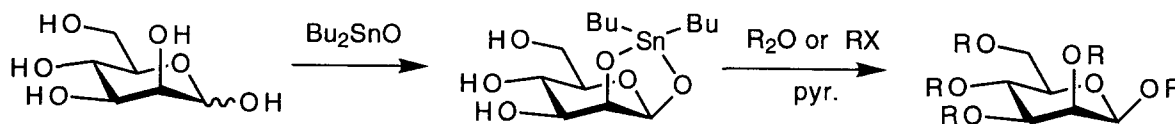
^c Unilever Research Laboratories, Colworth House, Sharnbrook, Bedford, MK44 1LQ, England, UK

The xyloglucon from cotyledons of *Hymenaea courbaril* was hydrolysed with *endo*-(1 → 4)-β-D-glucanase (cellulase) and analysed by TLC and HPAEC. The limit digest was different from those obtained from xyloglucans of *Tamarindus indica* and *Copaifera langsdorffii*. On treatment with nasturtium β-galactosidase two main oligosaccharides were detected. Using enzymatic sequencing involving alternate treatment with pure xyloglucon oligosaccharide specific α-xylosidase, and pure β-glucosidase, both from nasturtium, their structures confirmed by ¹H NMR were XXXG and a new oligosaccharide XXXXG. The relative proportions of XXXG and XXXXG indicate that half the subunits in *Hymenaea* xyloglucon are based on XXXXG. In the native polymer XXXXG carries galactosyl substituents in varying proportions, since cellulase hydrolysates contained many bands converted to XXXXG on hydrolysis with nasturtium β-galactosidase. Our results indicate that this polymer is less interactive with iodine following conformation changes owing to XXXXG.

Manipulation of free carbohydrates via stannylene acetals. Preparation of β-per-O-acyl derivatives of D-mannose, L-rhamnose, 6-O-trityl-D-talose, and D-lyxose

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NIDDK, National Institutes of Health, Bethesda, MD 20892-0815, USA



Structural studies of the O-specific side-chain of lipopolysaccharide from *Burkholderia gladioli* pv. *gladioli* strain NCPPB 1891

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A structure of the repeating unity of the O antigen of *Burkholderia gladioli* pv. *gladioli* has been proposed.

