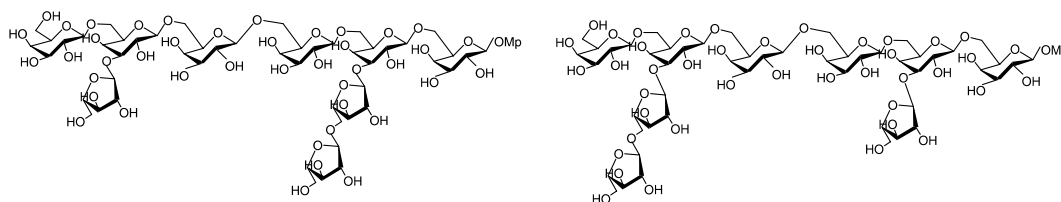


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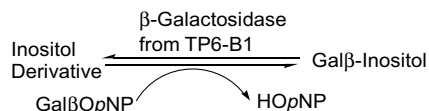
- Syntheses of arabinogalactans consisting of β -(1 \rightarrow 6)-linked D-galactopyranosyl backbone and α -(1 \rightarrow 3)-linked L-arabinofuranosyl side chains** pp 1847–1856

Aixiao Li and Fanzuo Kong*



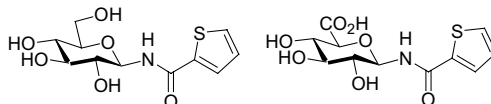
- Enzyme-catalysed synthesis of galactosylated 1D- and 1L-*chiro*-inositol, 1D-pinitol, *myo*-inositol and selected derivatives using the β -galactosidase from the thermophile *Thermoanaerobacter* sp. strain TP6-B1** pp 1857–1871

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- Synthesis of a glucuronic acid and glucose conjugate library and evaluation of effects on endothelial cell growth** pp 1873–1887

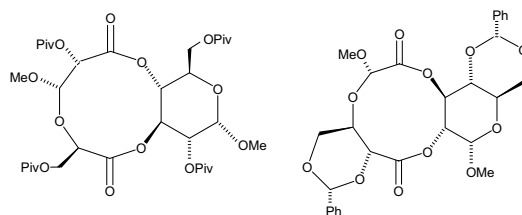
Nigel Pitt, Rhona M. Duane, Alan O' Brien, Helena Bradley, Stephen J. Wilson, Kathy M. O' Boyle* and Paul V. Murphy*



Sugar bislactones by one-step oxidative dimerisation with pyridinium chlorochromate versus regioselective oxidation of vicinal diols

pp 1889–1897

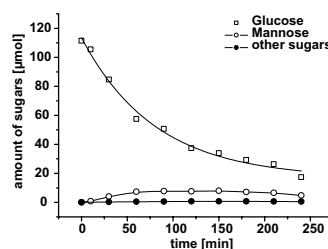
Amélia P. Rauter,* Fátima Piedade, Tânia Almeida, Rui Ramalho, Maria J. Ferreira, Ricardo Resende, Joana Amado, Helena Pereira, Jorge Justino, Ana Neves, Filipa V. M. Silva and Tana Canda



Kinetic and chemical studies on the isomerization of monosaccharides in *N*-methylmorpholine-*N*-oxide (NMMO) under Lyocell conditions

pp 1899–1906

Immanuel Adorjan, John Sjöberg, Thomas Rosenau,* Andreas Hofinger and Paul Kosma

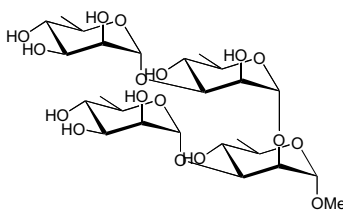


Isomerization and degradation reactions of monosaccharides under Lyocell conditions are discussed as shown, for example, for D-glucose.

Synthesis of a D-rhamnose branched tetrasaccharide, repeating unit of the *O*-chain from *Pseudomonas syringae* pv. *Syringae* (cerasi) 435

pp 1907–1915

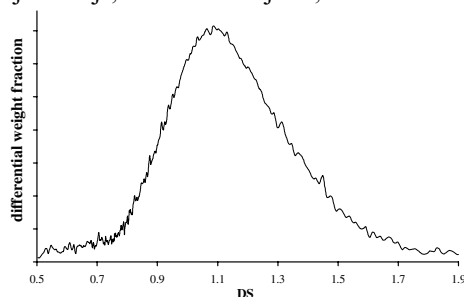
Emiliano Bedini,* Antonella Carabellese, Maria Michela Corsaro, Cristina De Castro and Michelangelo Parrilli



Determination of the degree of substitution and its distribution of carboxymethylcelluloses by capillary zone electrophoresis

pp 1917–1924

Kathalijne A. Oudhoff, F. A. (Ab) Buijtenhuijs, Peter H. Wijnen, Peter J. Schoenmakers and Wim Th. Kok*

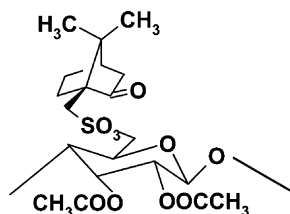


Distribution of a technical CMC sample.

Synthesis and characterization of camphorsulfonyl acetate of cellulose

pp 1925–1931

Dingshu Xiao, Jiwen Hu,* Mingqiu Zhang, Mingwei Li, Guozhi Wang and Haisong Yao



Camphorsulfonyl acetate of cellulose was synthesized and characterized. Compared with cellulose acetate, novel cellulose derivatives exhibited decreased thermal stability, improved solubility in organic solvents and enhanced enantioselectivity.

Pectin–chitosan interactions and gel formation

pp 1933–1939

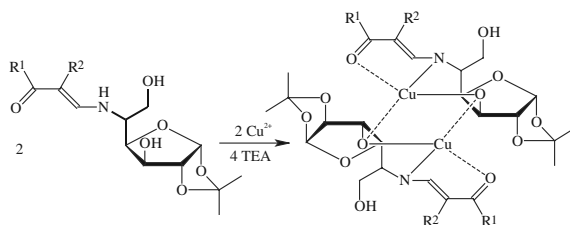
Mariya Marudova, Alistair J. MacDougall and Stephen G. Ring*

The effect of chitosan concentration on the gelation of pectins differing in charge density and distribution was examined, through the determination of gel stiffness and the binding of chitosan to the gel network.

Binuclear copper(II) complexes of 5-*N*-(β -ketoen)amino-5-deoxy-1,2-*O*-isopropylidene- α -D-glucofuranoses: synthesis, structure, and catecholoxidase activity

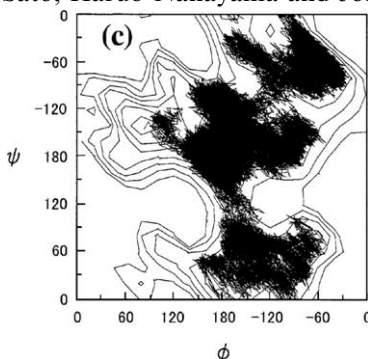
pp 1941–1952

Michael Gottschaldt,* Rainer Wegner, Helmar Görls, Peter Klüfers, Ernst-G. Jäger and Dieter Klemm

**The conformational free-energy map for solvated neocarrabiose**

pp 1953–1960

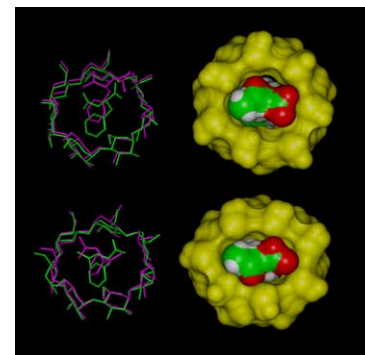
Kazuyoshi Ueda,* Tatsuro Ueda, Taiken Sato, Haruo Nakayama and John W. Brady*



Molecular dynamics (MD) simulations for the prediction of chiral discrimination of *N*-acetylphenylalanine enantiomers by cyclomaltoheptaose (β -cyclodextrin, β -CD) based on the MM-PBSA (molecular mechanics–Poisson–Boltzmann surface area) approach
Youngjin Choi and Seunho Jung*

pp 1961–1966

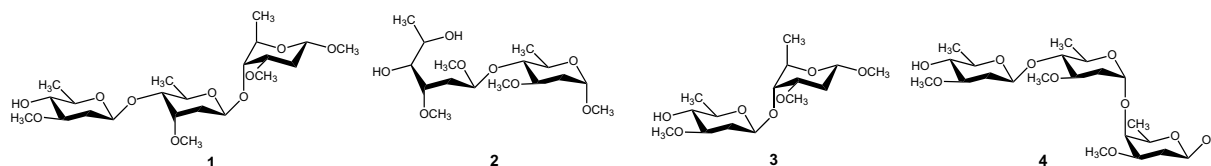
Molecular dynamics (MD) simulations based on the MM-PBSA (molecular mechanics Poisson–Boltzmann/surface area) approach were performed for the prediction of chiral discrimination of *N*-acetylphenylalanine enantiomers by β -cyclodextrin (β -CD), where the calculated relative difference ($\Delta\Delta G_{\text{binding}}$) of binding free energy was in fine agreement with the experimentally determined value.



Carbohydrates from *Cynanchum otophyllum*

pp 1967–1972

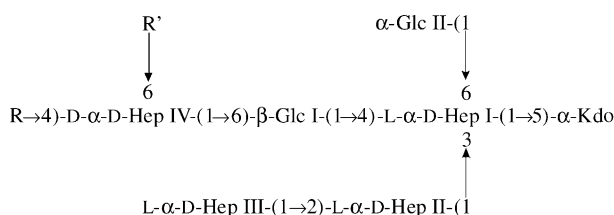
Yi-Bin Zhao, Yue-Mao Shen, Hong-Ping He, Yan-Mei Li, Quan-Zhang Mu and Xiao-Jiang Hao*



Structural analysis of the lipopolysaccharide derived core oligosaccharides of *Actinobacillus pleuropneumoniae* serotypes 1, 2, 5a and the genome strain 5b

pp 1973–1984

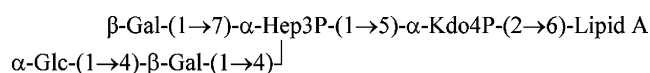
Frank St. Michael, Jean-Robert Brisson, Suzon Larocque, Mario Monteiro, Jianjun Li, Mario Jacques, Malcolm B. Perry and Andrew D. Cox*



The complete structure of the lipooligosaccharide from the halophilic bacterium *Pseudoalteromonas issachenkonii* KMM 3549^T

pp 1985–1993

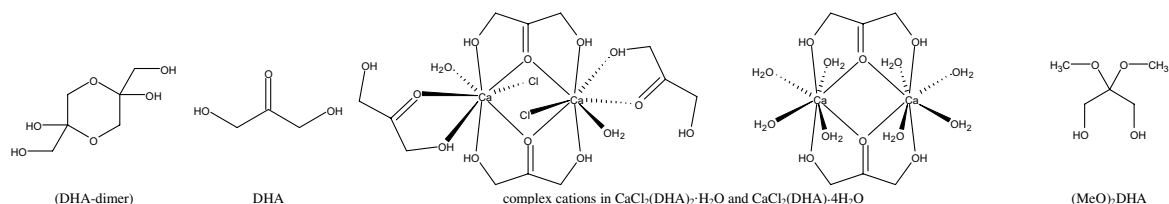
Alba Silipo, Serena Leone, Rosa Lanzetta, Michelangelo Parrilli, Luisa Sturiale, Domenico Garozzo, Evgeny L. Nazarenko, Raisa P. Gorshkova, Elena P. Ivanova, Natalya M. Gorshkova and Antonio Molinaro*



Crystal structures of dihydroxyacetone and its derivatives

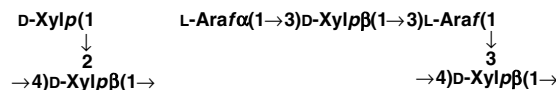
pp 1995–2007

Katarzyna Ślepokura* and Tadeusz Lis

**The gel-forming polysaccharide of psyllium husk (*Plantago ovata* Forsk)**

pp 2009–2017

Milton H. Fischer, Nanxiong Yu, Gary R. Gray, John Ralph, Laurens Anderson* and Judith A. Marlett

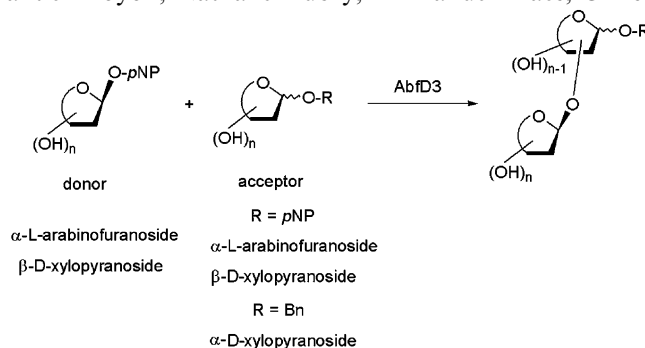


The physiologically active component of psyllium husk is shown to be a highly branched, neutral arabinoxylan with the suggested partial structures.

Synthesis of pentose-containing disaccharides using a thermostable α -L-arabinofuranosidase

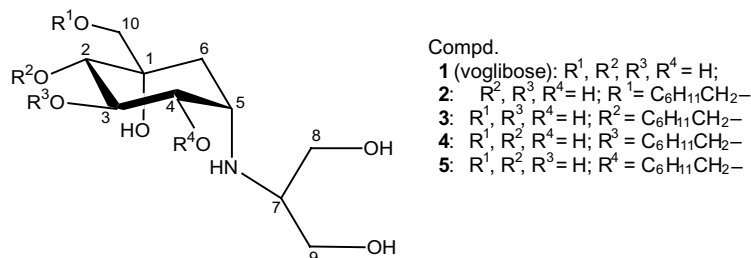
pp 2019–2025

Caroline Rémond, Richard Plantier-Royon, Nathalie Aubry, Emmanuel Maes, Christophe Bliard and Michael J. O'Donohue*

**NOTES****Determination of the structures of four new isomeric cyclitols**

pp 2027–2030

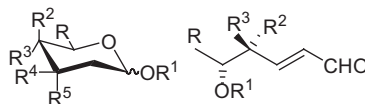
Hong Zhang, Cui-Rong Sun, Omar Ishurd, Yuan-Jiang Pan* and Li-Sheng Ding



Reinvestigation of the mercuration–demercuration reaction on alkylated glycals: an improved method for the preparation of 2,3-dideoxy- α,β -unsaturated carbohydrate enals

pp 2031–2035

Ram Sagar, Rashmi Pathak and Arun K. Shaw*

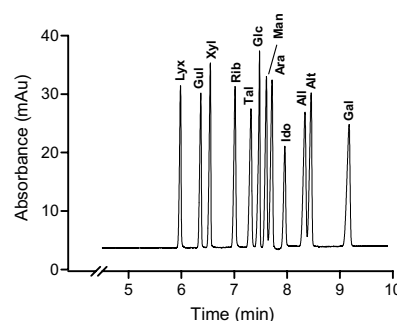


An optimized CZE method for analysis of mono- and oligomeric aldose mixtures

pp 2037–2043

John Sjöberg, Immanuel Adorjan, Thomas Rosenau and Paul Kosma*

A quick and robust capillary electrophoresis method to separate all 12 stereoisomeric aldopentoses and aldohexoses as well as cello- and xylodextrins was developed.



The structure of the O-specific polysaccharide from *Ralstonia pickettii*

pp 2045–2047

Evgeny Vinogradov,* Ludmila Nossova, Anna Swierzko and Maciej Cedzyński



where BacNAc is 2,4-diacetamido-2,4,6-trideoxyglucose.

Structure and hydrodynamic properties of the extracellular polysaccharide from a mutant strain (RA3W) of *Erwinia chrysanthemi* RA3

pp 2049–2053

Qiong Ding, Byung Yun Yang and Rex Montgomery*

The structure of the extracellular polysaccharide (EPS) produced by *Erwinia chrysanthemi* strain RA3W, a mutant strain of *E. chrysanthemi* RA3, has been determined using low pressure size-exclusion and anion-exchange chromatographies, high pH anion-exchange chromatography, glycosyl linkage analysis, and 1D H NMR spectroscopy. The polysaccharide is structurally similar, if not identical, to the family of EPS produced by such as *E. chrysanthemi* strains Ech9, Ech9Sm6, and SR260. The molecular weight of EPS RA3W by ultracentrifugation (sedimentation equilibrium) and light scattering is compared with those of other *E. chrysanthemi* EPSs, as are the viscometric properties.

*Corresponding author

Ⓜ⁺ Supplementary data available via ScienceDirect

COVER

Well-defined glycoforms of glycoproteins can easily be obtained by oxidative coupling of synthetic thioaldoses with proteins that have a cysteine moiety in lieu of an asparagine residue carrying natural N-linked oligosaccharides. In vitro glycosylation offers several advantages such as quantitative conjugation, incorporation of oligosaccharides that display high bioactivities and the possibility of using convenient bacterial or yeast protein expression systems. The figure is related to Geert-Jan Boons' *Carbohydrate Research Award* paper, Carbohydr. Res., **2004**, 339, 181–193.



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ISSN 0008-6215