

Carbohydrate Research Vol. 372, 2013

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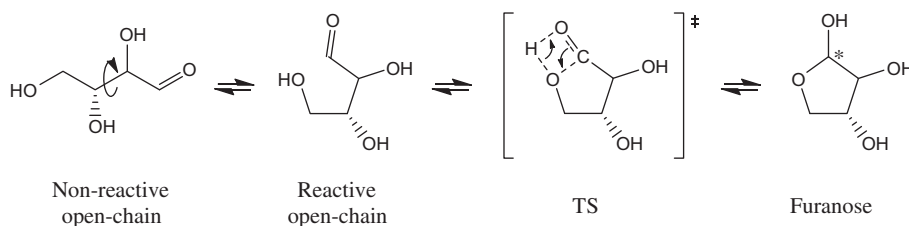
FULL PAPERS

Synthesis

Theoretical study of the mutarotation of erythrose and threose: acid catalysis

pp 1–8

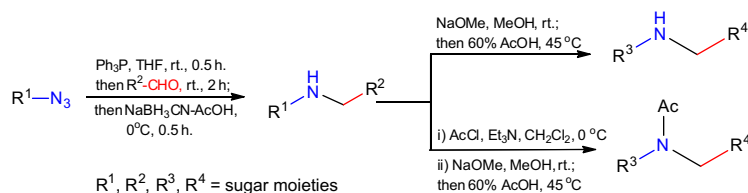
Luis Miguel Azofra*, Ibon Alkorta, José Elguero



A convenient synthesis of N-linked diglycose derivatives based on one-pot tandem Staudinger/aza-Wittig/reduction and biological evaluation

pp 15–22

Pingzhu Zhang, Yinbo Li, Ming Liu, Yanfei Wang, Cuicui Li, Donglai Ma, Hua Chen, Kerang Wang, Xiaoliu Li*, Jinchao Zhang

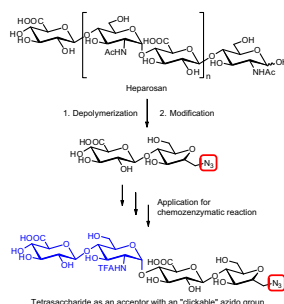


A series of novel N-linked diglycose derivatives were conveniently and directly synthesized based on the key step of one-pot tandem Staudinger/aza-Wittig/reduction reaction followed by deprotection. Some compounds exhibited good cytotoxicity to A-549.

Preparation and application of a 'clickable' acceptor for enzymatic synthesis of heparin oligosaccharides

pp 30–34

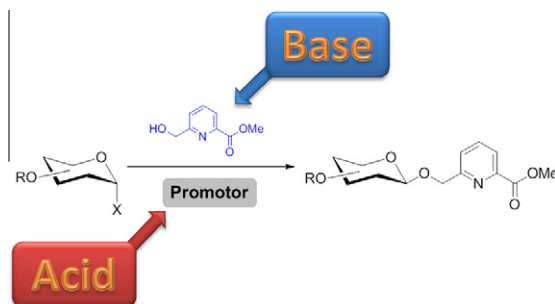
Chao Cai, Kristi Edgar, Jian Liu, Robert J. Linhardt*



Glycosylation of 'basic' alcohols: methyl 6-(hydroxymethyl)picolinate as a case study

pp 35–46

Shuai Wang, Dominique Lafont, Jani Rahkila, Benjamin Picod, Reko Leino, Sébastien Vidal*



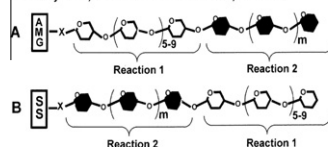
Biochemistry and Enzymes

Tests for the mechanism of starch biosynthesis: de novo synthesis or an amylogenin primer synthesis

pp 55–59

Rupendra Mukerjea, John F. Robyt*

Three reactions were conducted with two potential systems: (A) the putative Amylogenin (AMG) primer-protein and (B) Starch-Synthase (SS). Reaction 1 was with 2 mM ADPGlc to form the amylogenin carbohydrate primer with 7-11 glucose units; Reaction 2 was with 10 mM ADP-[C-14]Glc; and Reaction 3 with 10 mM nonlabeled ADPGlc. The following are the potential products for the two systems, after reactions 1 and 2 where, $m = 20-30$.

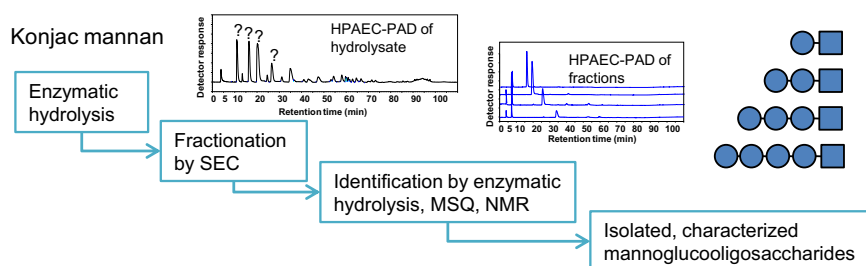


Both products can be removed from the proteins, reduced with NaBH₄, and acid hydrolyzed. Product A can never give C-14-D-glucitol, while B can give C-14-D-glucitol and after Reaction 3, C-14-D-glucitol is decreased.

Hydrolysis of konjac glucomannan by *Trichoderma reesei* mannanase and endoglucanases Cel7B and Cel5A for the production of glucomannooligosaccharides

pp 60–68

Atte Mikkelsen, Hannu Maaheimo, Terhi K. Hakala*

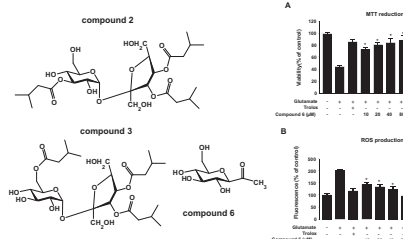


Characterization, Naturalproducts

Carbohydrate derivatives from the roots of *Brassica rapa* ssp. *campestris* and their effects on ROS production and glutamate-induced cell death in HT-22 cells

pp 9–14

Qian Wu, Jin-Gyeong Cho, Dong-Sung Lee, Dae-Young Lee, Na-Young Song, Youn-Chul Kim, Kyung-Tae Lee, Hae-Gon Chung, Myung-Sook Choi, Tae-Sook Jeong, Eun-Mi Ahn, Geum-Soog Kim, Nam-In Baek*



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