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Carbohydrate
RESEARCH

Carbohydrate Research Vol. 343, No. 8, 2008

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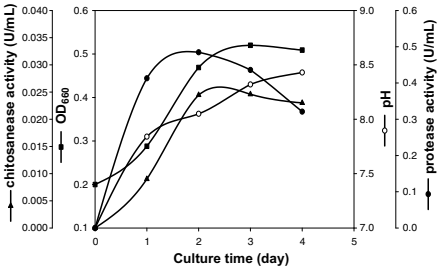
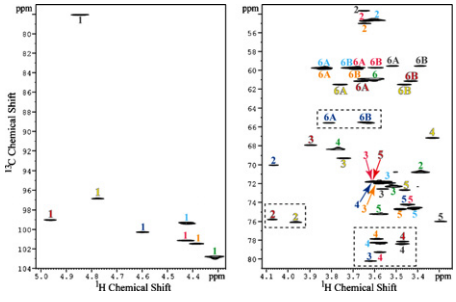
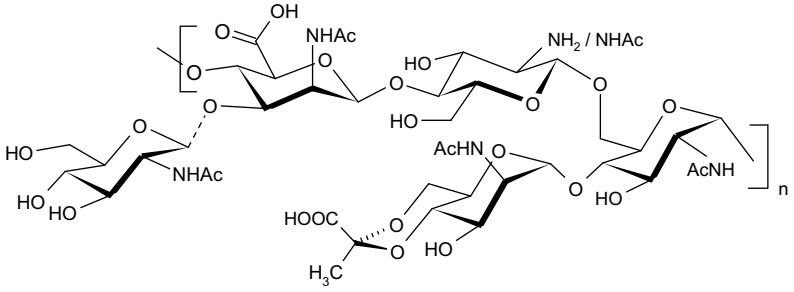


Time courses of chitosanase production in a culture of *Serratia marcescens* TKU011 on shrimp shell containing media: (●) protease activity (U/mL); (▲) chitosanase activity (U/mL); (○) pH; (■) OD_{660}.

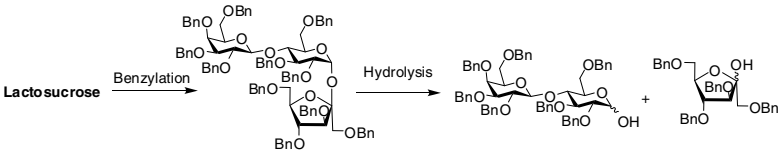
$$\text{Chit–NH}_2 + \text{R–COOH} \rightarrow \text{Chit–NH–CO-R}$$
$$\text{Chit–NH–CO-R} + e \rightarrow \text{Chit–NH}_2$$
$$\text{R–COOH} - e \rightarrow CO_2$$

Tartrate, citrate, and EDTA are sorbed onto chitosan with forming amide bonds. Applying electrolysis enables to regenerate the chitosan after sorption, that is, to destroy amide bonds onto cathode and to oxidize the carboxylates onto anode.

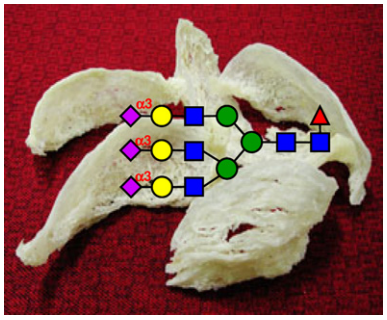


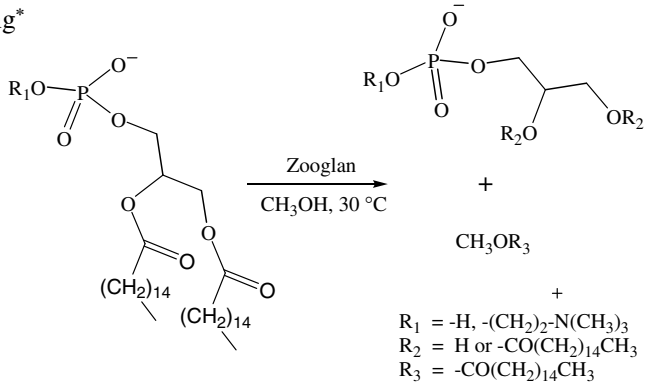


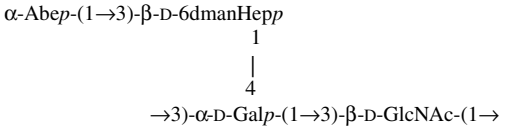
NOTES



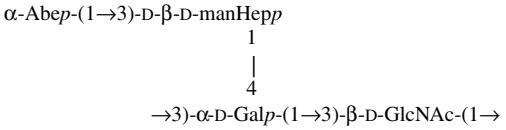
Other examples; raffinose, melezitose, stachyose and nystose.



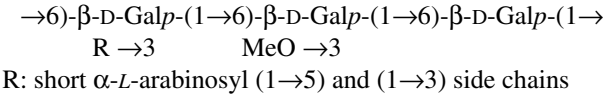




Y. pseudotuberculosis O:2a wild type polysaccharide



Y. pseudotuberculosis O:2a dmhA, dmhB mutant strains polysaccharides



R: short α-*L*-arabinosyl (1→5) and (1→3) side chains

*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).

Abstracted/Indexed in: Chem. Abstr.: Curr. Contents: Phys., Chem. & Earth Sci. Life Sci. Current Awareness in Bio. Sci. (CABS). Science Citation Index. Full texts are incorporated in CJELSEVIER, a file in the Chemical Journals Online database which is availabe on STN® International. Also covered in the abstract and citation database SCOPUS®. Full text available on ScienceDirect®

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ISSN 0008-6215