

PO 302

SYNTHESIS AND BIOLOGICAL ACTIVITIES OF N-[n-(β-D-GLUCOPYRANOSYLOXY) ALKYL]AMINIUM SALTS

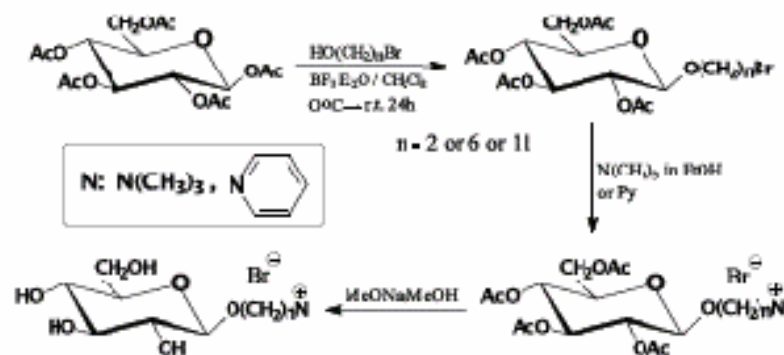
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Quaternary ammonium salts (QACs) constitute a huge, very interesting and widely used group of organic compounds. Their antibacterial, antiviral and antifungal activities are known well. The activity of many biological agents depends on the quaternary ammonium group presence. Many of them demonstrate antistatic and anticorrosive activity. Numerous QACs exhibit also surface activity, good detergency and low toxicity.[1]

A new series of quaternary ammonium bromides have been synthesized in reaction of 2-bromoethyl 2',3',4',6'-tetra-O-acetyl-β-D-glucopyranoside, 6-bromoethyl 2',3',4',6'-tetra-O-acetyl-β-D-glucopyranoside and 11-bromoundecyl 2',3',4',6'-tetra-O-acetyl-β-D-glucopyranoside with tertiary amines: pyridine and trimethylamine (scheme 1).

The structures of isolates were determined by spectral analysis including extensive 2D NMR analyses and X-ray crystallography. QACs demonstrated mutagenic activity in bioluminescence mutagenicity assay based on *Vibrio harveyi* A16 strain.[2]



Scheme 1

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References:

1. E. Obłąk, A. Gamian, *Postępy Hig. Med. Dosw.*, **2010**, *64*, 201-211.
2. B.Podgorska, G.Wegrzyn, *Lett. Appl. Microbiol.*, **2006**, *42*, 578-582.