

A n n o t a t i o n

Lika Mebonia

The condensation reaction of N-(4-carboxyphenyl)-2,3,4,6-tetra-O-acetyl- β -D-glucopyranosylamine with glycine ethyl ester hydrochloride

Department of Chemistry, Iv. Javakhishvili Tbilisi State University

Ilia Chavchavadze Ave. 3

In recent years, N-glycosides have gained great interest and practical importance in the field of chemistry, biochemistry and medicine. N-glycosides and their derivatives are used as central nervous system mediators, stimulants, also against pests in agriculture. Some synthetic N-glycosides exhibit potential antimetabolic, antiviral, and antitumor activity. The synthesis of new types of derivatives of N-glycosides and the study of their biological activity are still a promising research direction of carbohydrate chemistry.

The goal of our work was to synthesize derivatives of N-(4-carboxyphenyl)- β -D-glucopyranosylamine.

N-(4-carboxyphenyl)-2,3,4,6-tetra-O-acetyl- β -D-glucopyranosylamine has been synthesized from D-glucose and 4-aminobenzoic acid by refluxing in 96% ethanol in the presence of a glacial acetic acid catalyst and by the further acetylation of synthesized N-(4-carboxyphenyl)- β -D-glucopyranosylamine. By condensation of N-(4-carboxyphenyl)-2,3,4,6-tetra-O-acetyl- β -D-glucopyranosylamine with L-glycine ethyl ester hydrochloride in the presence of N,N'-dicyclohexylcarbodiimide and triethylamine at 0°C temperature, the N-[4-N'-(2,3,4,6-tetra-O-acetyl- β -D-glucopyranosyl)]aminobenzoyl-L-glycine ethyl ester have been obtained for the first time.

The structures of obtained compounds were established by physical-chemical methods of analysis.