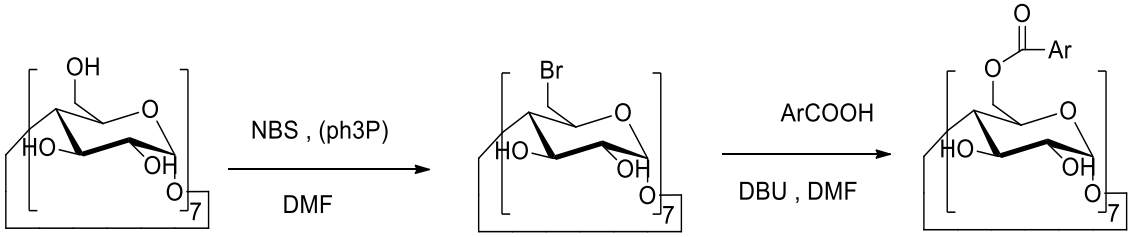
Synthesis of new derivatives of β-Cyclodextrin Esters as Drug Carreir Molecules

S. M. Seyedi *, M. Abbasi

Department of Chemistry, School of Sciences, Ferdowsi University of Mashhad, P. O. Box 91775-1436, Mashhad, Iran

Cyclodextrin (CDs) are valuable compounds as drug carriers due to their ability to form inclusion complexes. The size of cavity of these compounds allows selectivity for the complexation of guest molecules. The potential utilities of (CDs) are solubilization, encapsulation and transport of biologically active molecules. Amphiphilic cyclodextrin derivatives are very important in pharmaceutical applications based on their ability for self-organization in aqueous media. These compounds are tailored by grafting various length of lipophilic chains on to the entire primary or secondry hydroxyl groups of the glucopyranose units. The most common pharmaceutical application amphiphilic cyclodextrins is to increase the stability, solubility and bioavailibity of drug molecules and other pharmacological benefits, such as the low toxicity and reduction of unwanted side effect [1-3].

In this work, a new derivatives of amphiphilic β-cyclodextrin were synthesized by grafting aromatic carboxylic acids on to the primary hydroxyl groups via ester bond formation. The ability of the synthetic compounds for extraction of active biological molecules was then studied.



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