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Investigation of Phosphorylation of Cyclodextrins and Some their Derivatives

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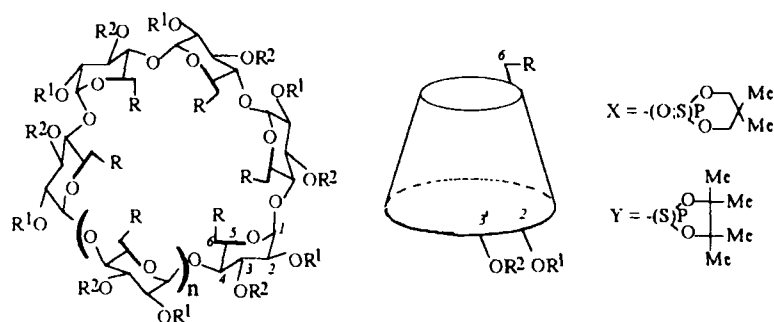
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Investigation of Phosphorylation of Cyclodextrins and Some their Derivatives

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Principal regularities of per- and regiodirected phosphorylation of α -, β -, and γ -cyclodextrins ($R=R^1=R^2=OH$, $n=1-3$) by trivalent phosphorus reagents were investigated. As a result, the first representatives of regularly organized phosphites and amidophosphites of cyclodextrins, including ones with *interglucoside* 2,3'-cyclophosphite bridges [$R^1+R^2=-P(NR_2')-$], having chiral cavities of different sizes, were obtained. Per-6-deoxy-6-bromocyclodextrins ($R=Br$) were considered as convenient intermediates for the synthesis of pyridinium salts with amphiphilic properties for the enhanced water-solubility and for the definite orientation at the phase boundary organic liquid-water.



R: OH, Br, tNC_5H_4 , Br, $OSiMe_2t-Bu$. X, Y: R^1, R^2 : X, Y: R^1+R^2 : $-P(NR_2')-$

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