

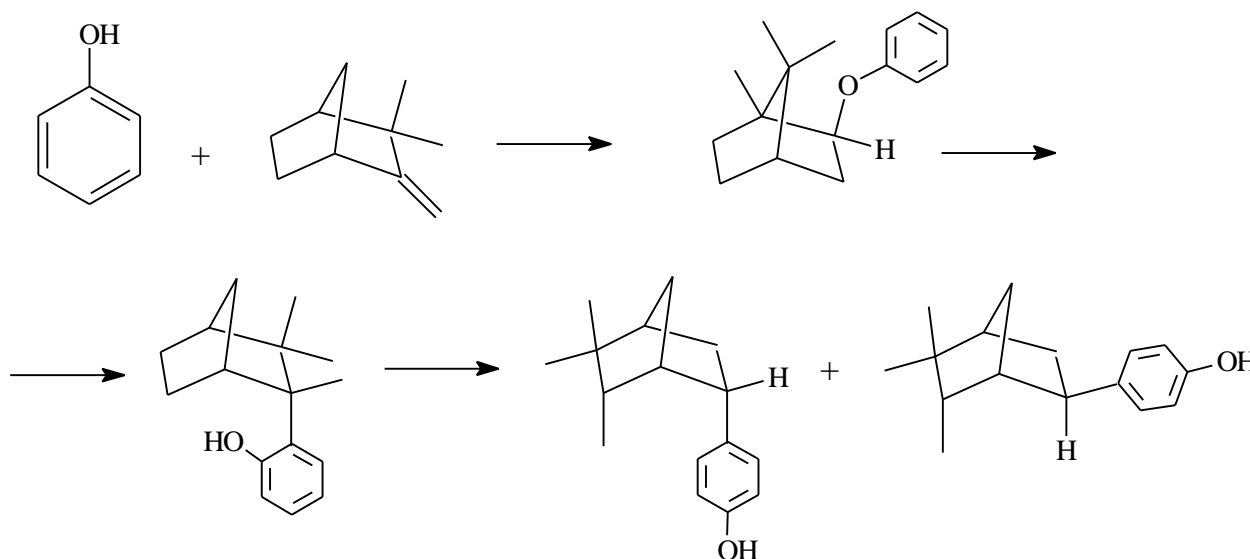
Selective Tandem Rearrangement during Phenol Alkylation by Camphene

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The purpose of our work - to investigate a Claisen rearrangement during phenyl isobornylic ether isomerization and phenol alkylation by camphene in the presence of different catalysts. Since many reactions involving bicyclic monoterpenoids occur as tandem ones, i.e. the main reaction is accompanied by skeletal rearrangement, the principal attention in this research is given to a raise of selectivity of process.

When catalyzed with $(\text{PhO})_3\text{Al}$, the isomerization of phenyl isobornyl ether or alkylation of phenol with camphene affords the ortho- isomer. ^1H and ^{13}C NMR revealed that the ortho-isomer has the exo-isocamphenyl structure. At presence BF_3 at an ice acetic acid the mixture of terpenic phenol para- and ortho-isomers will be formed. In this case ortho- and para-isomers contain till two isomers. Structure of this products is established now.



Besides, we examined alkylation of other phenols with camphene and rearrangement in this terpenic phenols.

Thus, it is established(installed), that the best catalyst phenol alkylation by camphene or isomerization phenyl isobornylic ether is $(\text{PhO})_3\text{Al}$, and tandem the Claisen-Wagner-Meerwein rearrangement proceeds regio- and stereoselectivity. Besides selection individual ortho- and the para- isomer opens a possibility of study of biological activity of these junctions.