

Полученный продукт синтеза – этиловый эфир циклогексанкарбонной кислоты является важнейшей добавкой – ароматизатором в пищевой промышленности, фармацевтике и сфере парфюмерных веществ.

Ключевые слова: циклогексен, монооксид углерода, дихлоробис(трифенилфосфин)палладия (II), хлорид (III) алюминия, гидроалкоксикабронилирование.

Summary

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HYDROETOXYCARBONYLATION OF CYCLOHEXENE IN THE PRESENCE OF A THREE-COMPONENT PdCl₂(PPh₃)₂-PPh₃-AlCl₃ SYSTEM

On the basis of carbon monoxide, oxygen-containing organic compounds can be synthesized, which are the main raw materials for the production of synthetic fibers and plastics, medicines, ointments, high-octane mixtures of solvents and lubricants. All studies conducted over the past 80 years indicate that in comparison with traditional methods of synthesis of carboxylic acid esters, the method of hydroalkoxycarbonylation of unsaturated compounds with carbon monoxide is the most effective method in all respects, since: olefins (petroleum products) hydroalkoxycarbonylation method in the presence of carbon monoxide (petroleum products and multi-tonnage harmful waste from many industries) and homogeneous metal-complex catalysts with alcohols the reaction of hydroalkoxycarbonylation of light carboxylic acid esters at one stage and is able to synthesize. Some esters have biological activity and are the main component of medicines.

In this paper, it was found that the most optimal and simple, effective method for the synthesis of cyclohexanecarboxylic acid ethyl ether is carbonylation of cyclohexene with carbon monoxide and ethanol in the presence of a three-component PdCl₂(PPh₃)₂-PPh₃-AlCl₃ metal-complex catalyst. The resulting product of synthesis ethyl ether cyclohexanecarbonyl acid is an important additive flavor in the food industry, the pharmaceutical industry and the field of perfume and substances.

Keywords: cyclohexene, carbon monoxide, palladium(II)dichlorobis (triphenylphosphine), aluminum (III) chloride, hydroalkoxycarbonylation.