CHLORACETYLATION OF TOLUENE IN THE PRESENCE OF SMALL QUANTITIES OF CATALYSTS

A.K.Abdushukurov

National University of Uzbekiston after name M.Ulugbek, chemical department

any.b@Rambler.Ru.

Chloracetylation of toluene in presence of equimolecular quantities of AlCl$_3$ in CS$_2$ solution was described in literature [1,2].

We have investigated reaction of toluene and chloroacetylchloride in presence of small quantities FeCl$_3$, Fe$_2$(SO$_4$)$_3$, AAF (asetylacetonat of Fe), CAF (calicylat of Fe) at 113-130$^\circ$C and duration 3h with the aim of determination of small quantities catalysts influence on the chloracetylation.

For the first time the catalytic activity of AAF and CAF was investigated. It was determined that by catalytic activity they didn’t yield to. FeCl$_3$, in the presence of which yield of product reaction was equal 69%.

Investigation of products of chloracetylation reaction of toluene has shown that it consisted from following compounds: 2-, 3-, and 4-methylphenacylchlorides phenylacilchloride and 2,4-dimethylphenacylchloride ratio of which depended on the conditions of carrying out reaction and nature of used catalyst:

As by products also phenacylchloride and 2,4-dimethylphenacylchloride were obtained in the result of transfer of alkyl groups.

Reactions products were identified with using of witnesses and ratio of their peaks in chromatograms GLC..

References
1. Kunckell F. Ueber einige helogenisirte ketone. –Ber., 1897, b.30, s. 577-579.