

Etherification



In this experiment is an organic reaction, forming ether from alcohol. Alexander Williamson discovered this reaction in 1850. Usually suitable either on the basis of availability or reactivity. The Williamson reaction is also frequently used to prepare an ether indirectly from two alcohols. One of the alcohols is first converted to a leaving group, then other two reacted. Alkyl is treated with alkaloid ion. Alkaloid can easily formed by doing alcohol with base.

Theory 2-octadecyloxynaphthalene made by SIN reaction, by carbon from Brocher attacked by alkaloid of alcohol and substitute BRB. The alcohol first being deprotonation (2-naphtha). And then continue to SIN reaction which the negative charge from alkaloid attack on the positive charge carbon on Brocher. Experimental 0,5 g of 2-naphtha and mol citronella were stirred with 1,234 g of Cesium carbonate and I-predominance on three necked flask that was placed on magnetic stirrer and reflux condenser. Around 11:17 the mixture start heated at ICC.

While the temperature rising up the color of the mixture changed to dark color green, reflux happen at 11:32 water dropping back to the three necked flask. The compounds in the mixture checked by TTL (Thin Layer Chromatography). After three attempt of the TTL, founded that there are O, CACM for RFC scale of the compounds. The mixture were cooled down and transfer the mixture to small round bottom flask. After that 1 mol of ethyl were add and washing phase start by the mixture being poured into the separator funnel. The mixture then being shaken firmly and the layer were made. The lower layer being removed and the ether layer stay. 1 spoon of Mages were added and filtered after move the mixture to an Erlenmeyer.

The solvent then being evaporated and removed. Due to the limited of time, my project was not finished and stop until this part. However crystallization of the crude product from ethanol should be made by heating the product.