THE USE OF IONIC LIQUIDS AS A PHASE TRANSFER CATALYST FOR THE DIALKYLATION OF AN ACTIVE METHYLENE COMPOUND

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APRIL 2009

This Final Year Project Report entitled **"The Use of Ionic Liquids as a Phase Transfer Catalyst for the Dialkylation of an Active Methylene Compound"** was submitted by Nur Liyana binti Shamsudeen, in partial fulfilment of the requirements for the Degree of Bachelor of Science (Hons.) Chemistry, in the Faculty of Applied Sciences, and was approved by

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Date: 7 MAY 2009

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ABSTRACT

THE USE OF IONIC LIQUIDS AS A PHASE TRANSFER CATALYST FOR THE DIALKYLATION OF AN ACTIVE METHYLENE COMPOUND.

A study on the use of ionic liquids as a phase transfer catalysts on the dialkylation of methylacetoacetate has given a new finding for the development of environmentally friendly catalysts. The structures of these dialkylated compounds were elucidated using modern spectroscopic techniques such as IR and NMR. Studies on the dialkylation of methylacetoatate with different elecrophiles had been carried out in the presence of different ionic liquids. The reaction mixture was left stirring overnight at room temperature under nitrogen gas, N_2 until all compounds dissolved. The result showed that ionic liquid which was 1-butyl-3-methylimidazolium tetrafluoroborate, $[bmim]BF_4^-$ as the most successful phase transfer catalyst for the dialkylation of methylacetoacetate as compared to 1-butyl-3-methylimidazolium hexafluorophosphate, $[bmim]PF_6^-$. With higher percentage yield obtained from ionic liquid of $[bmim]BF_4^-$, it certainly showed that this ionic liquid has potential for further investigations in other chemical transformations**.**