THESIS
CMT 679

STUDY OF THE EFFECT OF COMPATIBILIZER (MALEIC ANHYDRIDE) ON THE LDPE/NR/OIL PALM FIBER COMPOSITE

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This Final Year Project entitled "**Evaluation of compatibilizer on thermoplastic natural rubber reinforced by oil palm fiber**" was submitted by Raudhatul Jannah Bt Mohd Zuki, in partial fulfillment of the requirements for the Degree of Bachelor of Science (Hons.) Applied Chemistry, in the Faculty of Applied Sciences, and was approved by

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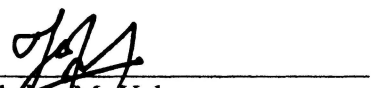

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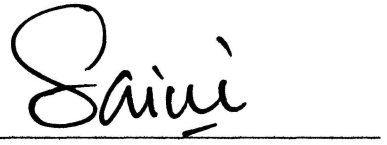

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Raudhatul Jannah Bt Mohd Zuki

TABLE OF CONTENTS

ABSTRACT

The mechanical properties of thermoplastic natural rubber (tpnr) which is LDPE/NR with the oil palm fiber composite were ascertained. Instead of that, the effects of adding the chemical of Maleic Anhydride (MA) into the composite as the compatibiliser to hardened the composite were also studied in term of mechanical properties of the composite. Any changes observed qualitatively and quantitatively. The thermoplastic natural rubber which is 50:50 of LDPE/NR content is mixed together and the various content of fiber is added. The sample is pressed using the hot press instrument to form the sample for the testing based on specific mould. The mechanical properties were determined by doing the tensile test and also impact test. The optimum of the fiber content was determined in the first step. The second step is adding the chemical of Maleic Anhydride into the composite to see its performance in order to inspect for the better improvement of the composite. The results from the two tests done must be considered to determine the best composition which has the best mechanical properties. The optimum composition for fiber loading is 15% and the optimum level of Maleic Anhydride is when 1% of its composition added into the composite through the best mechanical testing result.