



**COMPARISON OF MECHANICAL CHARACTERISTICS OF OIL PALM FRUIT  
BUNCH FIBRE (EFB)-POLYPROPYLENE (PP) COMPOSITE WITH OTHER  
COMPOSITE COMPOSITIONS**

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A thesis proposal submitted in partial fulfilment of the requirements for the  
award of Bachelor Engineering (Hons) (Mechanical)

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**APRIL 2005**

## **ACKNOWLEDGEMENT**

First of all, I would like say Alhamdulillah. Then, I would like to express my sincere appreciation to Puan Anizah binti Kalam, the supervisor of my thesis for her patience, generous guidance, encouragement and help. To Encik Razak Rohany, the General Manager of Poly Composite Sdn. Bhd. Malaysia for his helping hands in supplying samples and giving priceless information required. The appreciation also goes to my parents, staff and friends for their understanding, support and help in so many ways in the duration of the thesis preparation until it is complete. Thank you.

## ABSTRACT

Malaysia is the largest producer of palm oil in the world. The utilisation of oil palm fruit bunch in making palm oil contributing to so many oil palm empty fruit bunch and other residues of oil palm tree such as trunks and fronds. Therefore, many researchers and scientists not only in Malaysia tend to do research on how to manage of those residues or left over material including empty fruit bunch. They also want to develop or produce a value added products such as furniture, building and construction materials and many other consumer goods.

Recent studies on EFB came out with a new material composed of EFB-polypropylene (PP) composite which is claimed has a high strength, lower cost, versatile, recyclable, and environmental friendly.

Our study is still on EFB-PP composite however, we only wanted to analyse and compared its mechanical properties between two different compositions of sample. One of them consist no added additive while the other consist of added additive that is carbon. The specimens were sheet form supplied by PolyComposite Sdn. Bhd. Malaysia. The sheet was in average of 2 mm and 3mm thick.

After conducting tensile test, bending test, and strain gauge test, it was found that the Young's modulus of both sample is as much likely the same as calculated by Anizah et al for their EFB-epoxy composite. The same result was given by the supplier technical specifications. The value obtained from this study was typically in range with specification from supplier, except for flexural modulus obtained.

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