

**CELLULOSE FROM OIL PALM AS A FILLER IN PLASTIC
COMPOSITE**

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ABSTRACT

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The wastes from palm oil industry contribute to environmental harm because of the inappropriate disposable method. The objectives of this work were to study about potential waste of cellulose from palm oil as filler in the plastic composite and to determine physically and chemically test of cellulose as filler in the plastic composite. The types of filler used in the plastic composite are the cellulose from palm oil frond that obtained from UiTM Jengka. Four filler loadings were 5%, 10%, 15% and 20% of cellulose. The blending of cellulose and polypropylene took place in dispersion mixer for 15 minutes at 180°C before hot pressed and cold pressed. The FTIR result show the present of cellulose in the spectrum. Tensile strength MOR trend was decreased and MOE trend are increased. From MOR result, the 5% of cellulose as a filler in plastic composite had the highest strength compare to the others. The 20% filler produce greater tensile MOE value. The Highest MOE value indicate the sample tend to be more brittle.

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