

THERMOPLASTIC COMPOSITE FROM AQUILARIA MALACENSIS

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ABSTRACT

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This is a study of producing thermoplastic composite from *Aquilaria malacensis*. Tests such as bending, tensile, thickness swelling and water absorption is carried out. *Aquilaria* is more comfortable in making thermoplastic composite. Thermoplastic composite from *Aquilaria* is followed from 10%, 30%, and 50% of wood dust from *Aquilaria*. The results showed that 10% of wood dust of *Aquilaria* are most the suitable. This because from bending test showed that 10% of wood dust is very strength compare to 30% and 50%. Using more polypropylene (PP) can give chance to the fiber bounded each other with PP. Otherwise, using MAPP as a coupling agent may increase the strength of the thermoplastic. The thickness swelling (T/S) and water absorption showed that the water can absorb into 10% lower than 30% and 50%. Generally, using 10% of *Aquilaria* is the most suitable quantity for mix with PP to make the thermoplastic composite.