

***EFFECT OF FRACTION VARIATION OF COCONUT COIR FIBER  
COMPOSITION ON THE MECHANICAL STRENGTH OF COMPOSITES***

*by*

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***ABSTRACT***

*In the current era of technological development, composites with synthetic fiber reinforcement are widely used in various aspects of life, both in terms of use and technology. This study aims to find out the impact and tensile test strength of composite materials using coconut coir fiber as reinforcement with unidirectional and random fiber arrangement. The method used was an experiment using BQTN 157 polyester resin with coco fiber reinforcement with fractions of 30%, 40%, 50% respectively on the value of impact and tensile strength. The results showed that for the composite material with coconut fiber reinforcement with a unidirectional arrangement, the highest yield was 0.1029 J/mm<sup>2</sup> for the impact test and 21.58 N/mm<sup>2</sup> for the tensile test, compared to the random fiber arrangement, which was 0.0530 J/mm<sup>2</sup> for the impact test. and 11.64 N/mm<sup>2</sup> for the tensile test.*

***Keywords:*** *Composite, coco fiber, tensile strength, impact resistance*