

**PROPOSED STUDY OF SUGAR PALM (*ARENCA PINNATA*)
AS SUPPLEMENTARY MATERIAL FOR
FIBER REINFORCED CONCRETE**

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ABSTRACT

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The study was conducted to produce concrete using sugar palm fiber as supplementary material. Specifically, it was undertaken to determine the appropriate design mixture and proportion, the compressive strength of concrete at 7, 14, and 28 days curing. It also aimed to determine the workability of the concrete using sugar palm fiber as supplementary material and if the sugar palm fiber is feasible in producing fiber reinforced concrete. The different tests were performed to determine the effects of sugar palm fiber to the concrete were the slump test, and compression test.

The result showed that almost all of the treatment got their highest compressive strength at their 28th day curing period as compared to the 7th and 14th day curing period except treatment 3 which got its highest compressive strength on its 14th day curing period. From the gathered data, it showed that the mix proportion affects the strength of concrete in compression. From this study, it showed that instead of increasing the compressive strength of concrete, the addition of sugar palm fiber decreases the capacity. It also decreases the workability of mixture, as shown in the slump test result. These results revealed that sugar palm cannot be used as supplementary material for fiber reinforced concrete.

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