

# Review of: "Investigation of Mechanical Properties of Sisal Fiber and Sugar Palm Fiber Reinforced Hybrid Composites"

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**Potential competing interests:** No potential competing interests to declare.

In this manuscript, the authors investigated the mechanical properties of sisal and sugar palm fiber-reinforced hybrid composites. This is a poorly written manuscript and can be improved significantly by addressing the following suggestions and adding appropriate analysis in the discussion section.

1. In the abstract, the authors claim that 20% sisal fiber and 10% sugar palm fiber-reinforced composites exhibit better tensile properties. However, in section 4.1, it is mentioned that sample 3, i.e., 15% sisal and 15% sugar palm fiber-reinforced composite, has the highest tensile strength of 76 N/mm<sup>2</sup>. In the abstract, it is written as 6.67 N/mm<sup>2</sup>.
2. Explain the novelty of the work in the introduction section.
3. Before section 2.3, write a section to discuss the fiber extraction process.
4. In section 2.3, it is mentioned that the fibers were treated with a 20% NaOH solution, but the reason was not mentioned. The concentration of NaOH and the treatment time is very important for the optimum properties of natural fibers, and NaOH concentration varies with fiber type. It would be wise to cite appropriate references for choosing a 20% concentration or explain why it was chosen.
5. The caption of Figure 7, "Schematic diagram of the test specimens," would be more appropriate.
6. In section 2.3, it is written that the fibers were treated with 20% NaOH, but in section 3.3, it is written as 5%. So, which one is correct? This is very confusing.
7. In section 3.3, it is mentioned that the impact specimens were notched. It would be better if the schematic diagram of the notched specimen with dimensions were shown in Figure 7.
8. In section 4.1, it is mentioned that specimens were cut into a flat bar shape, but in Figure 7, the schematic diagram shows dogbone-shaped specimens.
9. There are some repeated sentences in sections 3 and 4 which should be avoided.
10. Figure 8 represents the stress-strain diagram, not tensile strength. How the strain was expressed in this figure? Was it in % or mm/mm? It would be better if it were mentioned in the figure. The tensile strength would be better represented in a bar chart like Figure 9.
11. The last two sentences of the first paragraph of section 4.2, "The flexural MR is about .....for given materials and mix design," are not related to this work. Rather, these are related to cementitious composites.
12. Since multiple samples were tested, it would be better if error bars were included in all the bar charts.
13. Please double-check the equation for water absorption calculation in section 4.4.
14. In the conclusion section, the authors mentioned that sample 3 has 20% sisal and 10% sugar palm fiber. However, in

section 2.3, it is mentioned that sample 3 has 15% sisal and 15% sugar palm fiber. The authors have used information that varies from section to section and is very confusing.