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.

The paper focuses on the manufacturing and characterization of bio-based composite materials made of sisal fiber and sugar palm fibers. For this, classical mechanical tests (tensile, bending, and impact) as well as the water absorption test have been conducted. My comments on the paper are:

1°) In the abstract, it is important to indicate the originality of this work.

2°) Please remove the references to the machines used for the mechanical tests (UTM INSTRON, …). This information should be mentioned in the experimental procedure, not in the abstract.

3°) The writing of the introduction is poor and must be rewritten and improved. In fact, 10 papers from the literature are not enough to build a consistent introduction. In the actual version, the writing authors have summarized the work done by each paper and not a group of papers that shared the same results.

In this context, some papers close to the proposed work are not cited; for this, I recommend the following papers:

- S. Prabhakaran et al. Experimental study on thermal and morphological analyses of a green composite sandwich made of flax and agglomerated cork. Journal of Thermal Analysis and Calorimetry 139, 3003-3012. 2020.
- N. Fatma et al. The effect of doum palm fibers on the mechanical and thermal properties of gypsum mortar. Journal of Composite Materials 53 (19), 2641-2659. 2020.
- IE. Sawi et al. Influence of the manufacturing process on the mechanical properties of flax/epoxy composites. Journal of Biobased Materials and Bioenergy 8 (1), 69-76. 2014.
- L. Toubal et al. Moisture effects on the material properties of a jute/epoxy laminate: impulse excitation technique contribution. Journal of Natural Fibers 15 (1), 39-52. 2018.

4°) The sentences of section 2 should be in the introduction section. In this section, authors should focus on the materials used, the manufacturing process used, as well as the equipment used for the characterization and the mechanical tests.

5°) Figure 1 and Figure 2 can be removed from the text. Focus more on the type of fibers used and the process of manufacturing.

6°) In figures 3 and 4, include scales on the images. In addition, please give more details about the process used for the extraction of the fibers (figures 3 and 4).

7°) After the chemical treatment, does the chemical solution modify the microstructure or the morphology of the fibers (on the surface)? I recommend authors to read the following paper about this point: - N. Fatma et al. The effect of doum palm fibers on the mechanical and thermal properties of gypsum mortar. Journal of Composite Materials. 2019.

8°) In figure 8, the schematic view of the specimens for the tensile test must be improved (better quality). However, for the rectangular specimens for the bending and impact tests, can be removed (description of the dimensions in the text is enough).

9°) The presentation of the results is poor. From the graph, it is not clear what the Sample 1, 2, and 3 are.

10°) The repeatability of the tests must be presented (stress vs. strain) and the standard deviation.

11°) A comparison with the literature review is strongly recommended.

12°) Mechanisms of failure must be described.

13°) Please improve the conclusion.