

Review Form 1.6

Journal Name:	Journal of Materials Science Research and Reviews
Manuscript Number:	Ms_JMSRR_94456
Title of the Manuscript:	Combined Natural Dye Extractor and Dryer Fabrication Process
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	<p>Natural dyes are sustainable and eco-friendly. There are many laboratory approaches have been reported about the extraction of natural dyes from plant sources but, the reports on industrial natural dye extraction machines are very limited. In this manuscript authors have been reported a combined natural dye extractor and dryer, which are efficient and can be used in textile, food, pharmaceutical, cosmetic, printing etc. industries as natural colorants. Therefore, this work titled "<i>Combined Natural Dye Extractor and Dryer Fabrication Process</i>" is suggested to publish on this journal after carefully modifying the below compulsory points:</p> <ol style="list-style-type: none"> 1. It is found that, author has discussed everything under the "Materials and methods" section. There is no "Result and Discussion" part. Results should be clearly described in a concise manner. Results for different parameters should be described under subheadings or in separate paragraph. The discussion should interpret the significance of the findings of the work. The results and discussion part can also be described as separate, if appropriate. 2. Current Figure 2 is showing the details 3D drawing of the machine with proper labeling of each main component, therefore, I suggest author should consider this figure to make as main figure (i.e. make Figure 2 as Figure 1). 3. Figure 1. Different views of the fabricated machines (a) Assembled Extractor and Dryer Machines (b) Front view (c) side view (d) Top view. And Figure 3. Isometric and Orthographic Drawing of (a) Extractor and (b) Dryer Machines. are just the repetition of Figure 2 and Figure 5. Therefore, I suggest author to remove Figure 1 and Figure 2 or these two figures can be put in supporting information if the journal supports. 4. In section 2.9: the calculation of extraction efficiency seems wrong (equation 23), citation required in order to support this equation. However, the correct formula, should be: Extraction Efficiency (%) = (yield / input) x 100. 5. Author should explain how the results for the "Predicted" yield is calculated in Table 2. Why the predicted yield is important here? 6. Author should also use more suitable parameter to explain the "residual" yield, for example "% of error" 7. In Figure 5; it is suggested that, author labels the "extraction unit" and "drying unit" on the photo. 8. Scientific name should always be italicized, e.g. "<i>Hibiscus sabdariffa</i>" should be written as "<i>Hibiscus sabdariffa</i>". 9. In section 2.9, authors have claimed that, extract yield obtained with their fabricated extractor is comparatively higher than those reported in the literature for steam-distillation extraction (0.2 %), reflux extraction (2.2 %) and Ultrasound-assisted extraction (2.3 %). It seems the results (% yield) reported in the literatures are after the purification, but in this work, it seems that efficiency and/or % yield is calculated without further purification of the extract, which is giving far higher value than those reported. Please explain. 	
Minor REVISION comments	<ol style="list-style-type: none"> 1. It is suggested that author cite some relevant articles to support the statement, "<i>The use of natural dyes in textile dyeing industries is greatly on the increase as a result of the toxic nature of synthetic dyes which may be carcinogenic, potential contamination and other risk associated with processing.</i>", in introduction. 2. "<i>Unfortunately, natural dye in Nigeria has not been widely available in powder form, hence cannot be stored for a long time.</i>", please cite 1-2 references. 3. Relevant articles should cite to support the statement, "<i>However, synthetic dyes are produced through hazardous chemical processes which can pose a serious threat towards the ecosystem.</i>" 4. In introduction, "<i>Natural dyes/colorants have been used since the existence of man.</i>" In this sentence, instead of mane I think "human" or "mankind" should be more appropriate word. 5. In section 2.6, "<i>The feed material was measured and poured into the extraction machine through the pork,</i>" in this sentence, it seems word "pork" is a typo. It should be "port". Please check and correct. 6. In section 2.9, 3rd paragraph, it seems author has written "1 kg" instead of "1 Kg". Please check and correct. 	
Optional/General comments	Author should take care of the spellings, typo errors, choosing more appropriate words, and other grammatical and punctuation errors during their next revision. It is also advised to improve the image quality and clarity if possible.	

PART 2:

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Are there ethical issues in this manuscript?	<u>(If yes, Kindly please write down the ethical issues here in details)</u>	

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