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| Journal Name: | [[Current Journal of Applied Science and Technology](https://journalcjast.com/index.php/CJAST).](https://journaljeai.com/) |
| Manuscript Number: | **Ms\_** CJAST**\_138241** |
| Title of the Manuscript: | **Fermenting cocoa using a starter strain of Candida tropicalis: A strategy to improve the quality of cocoa beans in Côte d’Ivoire** |
| Type of the Article | **Original Research Article** |

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| PART 1: Comments | | | | |
|  | Reviewer’s comment **Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | | **Author’s Feedback** (It is mandatory that authors should write his/her feedback here) | |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.** | The manuscript "Fermenting cocoa using a starter strain of Candida tropicalis: A strategy to improve the quality of cocoa beans in Côte d’Ivoire" refers to using Candida tropicalis to ferment cocoa beans. Fermentation of cocoa beans is mandatory and skilled process to enhance the flavour, colour, texture and taste of the cocoa beans and its byproducts. | |  | |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | **The title is not apt.**  **I would suggest " Effect of inoculum size in fermentation of cocoa beans using Candida tropicalis"** | |  | |
| Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here. | **The abstract is comprehensive of the work reported by the authors.** | |  | |
| Is the manuscript scientifically, correct? Please write here. | Yes the manuscript is scientifically correct | |  | |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | The references are correct. However is suggest quoting to recent studies not later that 8- 10years. | |  | |
| Is the language/English quality of the article suitable for scholarly communications? | The language has to be improved | |  | |
| Optional/General comments | **Considering only pH and concentration of total reducing sugars is very preliminary. Further inclusions such as isolation of the starter culture from various sources, its comparison with fermenting abilities of similar or other strains. Including more parameters which influence the fermentation such as temperature, agitation, etc.. might add value to the work.**   * **Please check the manuscript for grammatical and spelling mistakes.** * **Under materials and methods: Methods (2.1) Please clarify if the culture *Candida tropicalis* was isolated by the authors or procured from any other source.** * **Please justify or rephrase the statement, "The freeze-dried strain was proposed by researchers from Biotechnology Research Unit at Felix Houphouët Boigny University ".** * **What was the criteria for selection of the cocoa pods involved in the study ?** * **2.2.1 : Frozen cultures have to be first revived, checked for viability and purity before being used for fermentation. The authors did not mention anything in this regard.** * **Please discuss the numericals mentioned in the formula.** * **2.2.2 What is the significance of using banana leaf ?** * **The authors mentioned starter powder referring to 2.2.1 but there is nothing as such mentioned under that section.** * **The authors mentioned spontaneous fermentation in cocoa pods, how was this avoided in the test pods? How did the authors make sure there was no spontaneous fermentation in the pods under study as there is no mention of any sterilisation methods involved.** * **2.2.2.1 What is the significance of adding methanol and HCl ?** * **Please elaborate on what is fermentation index ? and how is int relevant to the present study ?** * **2.2.2.2 How is titration studies justified for a dark coloured solution ? Adding 20g of cocoa powder results in a brown colour solution, how can the characteristic pink colour be observed ? Please justify the method used for this analysis.** * **2.2.2.4 What was the time of heating for extracting soluble sugars from the cocoa pulp?** * **2.2.2.6 explain in detail the significance of cut method. Can the cocoa beans be used for fermentation again after being cut? How is progress of fermentation monitored and inferred?** * **3.1.3 Not adding inoculum to the control does not mean the control is void of any other contaminant which can cause fermentation.** * **3.1.4 Please justify why is the concentration of reducing sugars and total sugars is decreasing in the bean pulp, where as it is increasing with time in bean cotyledon as mentioned in 3.1.5.** * **3.1.6 Browing is also possible by simply exposing to sun. Please justify how do you claim fermentation as the only cause for browning.** * **What is the type of reducing sugars present in the cocoa pulp and cotyledon ? Can *Candida tropicalis*  ferment those sugars *?* If yes, why is there a increase in the amount of total sugars in the cotyledons?**   **Studying only the pH and determining the concentration of reducing sugars are very preliminary methods and minimal for a scientific study.** | |  | |
| **PART 2:** | | | | | |
|  | | Reviewer’s comment | | **Author’s Feedback** (It is mandatory that authors should write his/her feedback here) | |
| **Are there ethical issues in this manuscript?** | | *(If yes, Kindly please write down the ethical issues here in detail)* | |  | |

**Reviewer details:**

**Shalini Rachel Silas,Osmania University , India**