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REVIEWER'S REPORT

Manuscript No.: IJAR-51234 Date: 25/04/2025

Title: Substitution of Rice Flour Components with Sago Flour in Yeast Career Media on the Growth of Sacharomyces cerevisiae FNCC3049

Recommendation:
Accept as it is .....
Accept after minor revision.....Yes.....
Accept after major revision .....
Do not accept (*Reasons below*) .....

Rating	Excel.	Good	Fair	Poor
Originality	•			
Techn. Quality	•			
Clarity		•		
Significance		•		

Reviewer Name: Dr. Sireesha Kuruganti **Date:** 25/04/2025

Reviewer's Comment for Publication.

(*To be published with the manuscript in the journal*)

The reviewer is requested to provide a brief comment (3-4 lines) highlighting the significance, strengths, or key insights of the manuscript. This comment will be Displayed in the journal publication alongside with the reviewers name.

The research is well-structured, with a clear progression from introduction to conclusion.

Detailed Reviewer's Report

Detailed Review of Manuscript: Substitution of Rice Flour Components with Sago Flour in Yeast Carrier Media on the Growth of Saccharomyces cerevisiae FNCC3049

I. General Comments

This manuscript investigates the potential of using sago flour as a substitute for rice flour in the carrier media for the yeast Saccharomyces cerevisiae. The study is relevant due to the potential of sago flour as a locally available and cost-effective alternative to rice flour, particularly in regions like Papua (as highlighted in the text). The research is generally well-structured, with a clear progression from introduction to conclusion. However, some areas need improvement in terms of clarity, data presentation, and discussion.

II. Specific Comments

A. Abstract (Lines 2-10)

* The abstract provides a good overview of the study's purpose, methods, and key findings.

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* Line 9: The phrase "shoved better growth" should be replaced with more formal scientific terminology, such as "exhibited greater growth" or "supported higher growth rates."
* Line 10: The use of "shoved dense yeast colony growth" is informal and should be rephrased (e.g., "exhibited substantial yeast colony growth").

B. Introduction (Lines 11-55)

* The introduction effectively establishes the context of the study, explaining the use of yeast carrier media and the potential of sago flour.
* Lines 20-24: The rationale for using sago flour as an alternative to rice flour is clearly presented, highlighting its local availability and potential to increase economic value.
* Line 27: The claim about sago flour having a low glycemic index is interesting but requires a citation to support this statement.
* The literature review could be expanded to provide more in-depth information on:
  * The specific nutritional composition of sago flour compared to rice flour.
  * The challenges and benefits of using sago flour in food fermentation.
  * Previous research on the use of sago flour in yeast cultivation or similar applications.

C. Materials and Methods (Lines 56-96)

* The materials and methods section is generally well-described, providing sufficient detail for replication.
* Line 69: It would be helpful to provide the full name and location of Food and Nutrition Culture Collection (FNCC).
* Line 85: Specify the method used to determine the number of cells in ml of medium (e.g., hemocytometer counting).
* Line 86: The starter cell density should include units (e.g., cells/mL).
* Line 88: The experimental design is clearly outlined, with a good description of the different media compositions.
* Line 89: The parameters measured are clearly defined.

D. Results and Discussion (Lines 97-189)

* The results are presented clearly, with appropriate references to figures.
* Figure 2 (Line 107-110): The figure is mentioned in the text, and helps visualize the growth of S. cerevisiae on different media.
* Figure 3 (Lines 111-118): It would be beneficial to add error bars to Figure 3 to show the variability in the data.
* Figure 4 (Lines 119-129): The discussion of the drying process and the effect of fiber in sago flour is relevant.
* Figure 5 (Lines 134-139): The description of the color differences in the media is clear.
* Figure 6 (Lines 134-145): The morphological observation of yeast cells is a valuable addition.
* Figure 7 (Lines 140-145): It is essential to explain the unit of measurement for yeast cell density (CFU/gram) in the figure caption or the text.
* Discussion:
  * The discussion effectively interprets the results and relates them to existing literature.
  * Line 157: The citation "(Dabija et al., 2017)" should be included in the references.
  * Lines 158-160: The explanation of the weight changes in the medium is clear.
  * Lines 161-169: The description of yeast cell morphology is detailed and supported by a reference to SEM studies.
  * Lines 170-174: The discussion of the impact of sago flour composition on yeast growth is insightful.
  * The discussion could be strengthened by:
    * A more detailed comparison of the nutritional composition of rice flour and sago flour and how these differences might affect yeast growth.

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* Further exploration of the "optimal conditions" mentioned in line 174. What specific factors (e.g., pH, temperature, aeration) might be optimized to improve yeast growth on sago flour-based media?
* Addressing the limitations of the study (e.g., sample size, specific sago flour variety used).

E. Conclusion (Lines 184-187)

* The conclusion accurately summarizes the main findings of the study.
* Line 185 and 186: To maintain consistency, use the same phrasing as in the results section (e.g., "media with 50 grams of sago flour substitution").

F. Acknowledgments (Lines 188-189)

* The acknowledgment is appropriate.

G. References (Lines 190-266)

* The reference list appears to be comprehensive.
* Ensure all references are formatted consistently and accurately.
* Double-check for any missing references mentioned in the text.

III. Recommendations for Revision

* Refine Language: Replace informal language with more appropriate scientific terminology (e.g., "shoved" to "exhibited").
* Provide Additional Citations: Support claims with appropriate citations, especially for the low glycemic index of sago flour (line 27) and any factual information.
* Enhance Literature Review: Expand the introduction to include a more in-depth review of relevant literature.
* Clarify Methodology: Provide additional details on specific methods, such as cell counting and starter cell density units.
* Improve Data Presentation: Add error bars to Figure 3 to represent data variability and explain the units in Figure 7.
* Strengthen Discussion: Provide a more detailed comparative analysis of rice flour and sago flour, discuss optimal growth conditions, and address study limitations.
* Ensure Consistency: Maintain consistent phrasing throughout the manuscript.
* Review References: Carefully review and format the reference list.

By addressing these points, the authors can significantly improve the clarity, rigor, and impact of their manuscript.