ISSN(O): 2320-5407 | ISSN(P): 3107-4928

# International Journal of Advanced Research

**Publisher's Name: Jana Publication and Research LLP**

*www.journalijar.com*

## REVIEWER'S REPORT

Manuscript No.: IJAR-55426

**Title: Phytochemical, microbiological and sensory characteristics of tiger nut (Cyperus esculentus L.) milk pasteurized at different times**

**Recommendation:**

Accept as it is .....

Accept after minor revision.....

Accept after major revision .....

Do not accept (*Reasons below*) .....

| Rating | Excel. | Good | Fair | Poor |
|---|---|---|---|---|
| Originality | | x | | |
| Techn. Quality | | | | x |
| Clarity | | x | | |
| Significance | | | x | |

Reviewer Name: Dr. Hari Prashad Joshi

## *Detailed Reviewer's Report*

This manuscript presents a well-designed and valuable investigation into the effects of pasteurization time on the quality characteristics of tigernut milk, addressing an important topic of valorizing underutilized local resources. The experimental design is logical, comparing five treatments with appropriate analytical methods. The findings that vitamin C is heat-sensitive while certain polyphenols are stable, and that pasteurization effectively reduces microbial load, are clear and contribute useful data to the field. However, the manuscript requires major revision to address significant issues with clarity, consistency, and data interpretation before it can be considered for publication.

The most pressing concerns are numerous inconsistencies and errors that undermine the manuscript's credibility. The abstract mentions a treatment "LP5" which does not exist in the main methodology (which uses LP10, LP15, LP20, LP25). The "Materials" section incorrectly lists "Sentinel-2 imagery" as a tool, which is irrelevant to this food chemistry study. There are critical labeling errors in the tables and figures; for instance, Table 3 lists a treatment as "LAIT" instead of "LP15," and Figure 3 referenced in the text does not correspond to the provided figure numbering. The microbiological standards referenced (e.g., AFNOR, 1996) are outdated and should be updated to current international guidelines (e.g., ISO, FDA). Furthermore, the data presentation and statistical analysis need substantial improvement. The results for phytochemicals and sensory evaluation are presented with letter designations for significance but lack the essential supporting statistical data (e.g., F-values, degrees of freedom from the ANOVA). The discussion is largely descriptive, repeating results and making simple comparisons to other studies, but fails to provide a mechanistic explanation for the observed trends for example, why polyphenols were stable while vitamin C degraded, or the potential implications of reduced tannins. The conclusion oversimplifies the findings, stating only vitamin C was lost after 20 minutes, contradicting the data which also shows a significant decrease in tannins.

To be suitable for publication, the authors must meticulously correct all typographical and labeling errors, update referenced methodologies, provide full statistical reporting, and substantially deepen the discussion to explain the underlying chemical and sensory phenomena observed. The foundation of the research is strong, but these revisions are essential for ensuring scientific rigor and clarity.