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REVIEWER'S REPORT

Manuscript No.: IJAR-52372

Date: 21-06-2025

Title: EVALUATION OF THE ACIDITY AND MICROBIOLOGICAL QUALITY OF ARTISANAL MILK AND DEGUE SOLD IN BAKERIES IN ABOBO (CÔ TE D'IVOIRE)

Decommondation	Rating	Excel.	Good	Fair	Poor
Accept as it is	Originality			2	
				N	
Accept after major revision	Techn. Quality			N	
Do not accept (<i>Reasons below</i>)	Clarity				
	Significance				

Reviewer's Name: Tahir Ahmad

Reviewer's Decision about Paper:

Recommended for Publication.

Comments (Use additional pages, if required)

Reviewer's Comment / Report

General Overview:

The manuscript presents a focused and well-executed study on the acidity and microbiological quality of artisanal milk and "dèguê" sold in the urban commune of Abobo, Côte d'Ivoire. The study addresses a significant public health concern related to the consumption of dairy-based products in informal and semi-formal markets, offering essential insight into local food safety conditions.

Scientific Relevance and Originality:

This research is highly relevant, especially in the context of urban public health, food hygiene, and informal food economies in West Africa. Artisanal dairy products such as "dèguê" are widely consumed, yet often insufficiently regulated. The originality of the study lies in its dual focus on physicochemical (pH, acidity) and microbiological (bacterial contaminants) analyses, providing a comprehensive perspective on the sanitary quality of these products.

Methodological Soundness:

The methodology is clearly described and adheres to standard microbiological and food chemistry protocols. Sampling across five bakeries, repeated five times, and maintaining the cold chain throughout, reflects methodological rigor. The analyses of pH, titratable acidity, and microbial load were performed according to referenced standards, enhancing the credibility and reproducibility of the study. The

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identification of specific pathogens such as *E. coli*, *Listeria monocytogenes*, and *Staphylococcus aureus* is particularly valuable for risk assessment.

Results and Interpretation:

The findings indicate a consistent acidity level within expected ranges for fermented dairy products, suggesting appropriate fermentation and refrigeration practices. However, the microbiological analysis reveals widespread contamination, with levels of harmful bacteria exceeding recommended standards. Notably, *Salmonella* was absent, but the presence of other pathogens poses significant health risks. These results highlight potential lapses in hygiene during production, handling, or distribution. The interpretation of the data is clear, and the implications are well contextualized within food safety frameworks.

Structure and Clarity:

The manuscript is well-structured, with a logical flow from the abstract through to the introduction and results. The language is clear and accessible, and technical terminology is appropriately used. The use of specific bakery names and consistent referencing of established standards strengthens the transparency of the findings. Both the scientific community and local policymakers would find the report comprehensible and actionable.

Public Health and Policy Relevance:

This work is particularly important from a public health perspective. Given the popularity of milk and "dèguê" in Abidjan, the detection of pathogenic microorganisms in these products underscores the need for enhanced hygiene practices and possibly regulatory oversight. The research supports evidence-based decision-making for health authorities, food safety regulators, and producers.

Scholarly Merit:

The manuscript demonstrates academic rigor and a clear understanding of microbiological risks associated with traditional food products. The integration of field sampling, laboratory analysis, and health risk interpretation reflects high scholarly standards. The study's regional focus also contributes to the limited but growing body of literature on food microbiology in sub-Saharan Africa.

Conclusion:

This research provides important empirical data on the sanitary quality of commonly consumed artisanal dairy products in Abobo, Côte d'Ivoire. It successfully documents both physicochemical and microbiological parameters, underscoring potential health risks for consumers. The study makes a timely and relevant contribution to food safety research and public health awareness in urban West African settings.