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REVIEWER'S REPORT

Manuscript No.: IJAR-53484 Date: 21/08/2025

Title: **"SEASONAL VARIATIONS IN NUTRIENT COMPOSITION OF SELECTED FRUITS AND THEIR IMPLICATIONS FOR TYPE 2 DIABETIC MANAGEMENT"**

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

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

Reviewer Name: Dr. S. K. Nath Date: 22/08/2025

Reviewer's Comment for Publication:
The research concludes that seasonal variation significantly impacts the nutrient composition of tropical fruits in Nigeria. Rainy season fruits tend to have higher vitamin C and lower sugars, making them potentially more suitable for glycemic control, while dry season fruits are richer in proteins, sugars, and micronutrients, which could pose challenges or benefits depending on individual health status. The findings underscore the importance of considering seasonal nutrient fluctuations in dietary planning for individuals with type 2 diabetes, emphasizing the need for tailored nutritional advice based on the season.

Reviewer's Comment / Report

Strengths:

1. **Relevance to Public Health:** Addresses an important issue—how seasonal variations influence nutrient content in common tropical fruits, which has direct implications for dietary management of type 2 diabetes.
2. **Comprehensive Analysis:** The study assesses a wide range of nutrients, including macro- and micronutrients, antioxidants, vitamins, and minerals, providing a holistic view of fruit composition.
3. **Methodological Rigor:** Utilizes standard AOAC methods, atomic absorption spectrophotometry, and spectrophotometric techniques, ensuring reliability and accuracy of data.
4. **Contextual Significance:** Focuses on locally available fruits in Nigeria, making the findings highly relevant to regional dietary practices and health interventions.
5. **Seasonal Comparison:** Captures data during both rainy and dry seasons, highlighting significant fluctuations that could impact dietary recommendations.

Weaknesses:

1. **Limited Sample Size and Geographic Scope:** The study is confined to Ibadan, Nigeria, which may limit the generalizability of results to other regions with different climatic or agricultural conditions.
2. **Lack of Consumer-Level Data:** No information on fruit ripeness, storage, or post-harvest handling which could influence nutrient content.
3. **Absence of Glycemic Index Data:** While nutrient content is detailed, direct measurements of glycemic response (e.g., glycemic index/load) of these fruits across seasons would strengthen the implications for diabetic diets.
4. **Potential Variability in Sampling:** Random purchases from local markets may introduce variability due to differences in sorting, sourcing, or maturity stage.

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5. **Limited Discussion on Practical Dietary Implications:** The paper discusses nutrient fluctuations but lacks detailed guidance on how consumers or healthcare providers should modify fruit intake seasonally for optimal diabetes management.