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REVIEWER'S REPORT

Manuscript No.: IJAR-52026 Date: 02-06-2025

Title: " PRESENCE OF MYCOTOXINS (AFLATOXIN B1 AND OCHRATOXIN A) IN EDIBLE CATERPILLARS (IMBRASIA OYEMENSIS) CONSUMED IN WESTERN AND CENTRAL-WESTERN CÔTE D\'IVOIRE"

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

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

Reviewer's Name: Mr Bilal Mir

Reviewer's Decision about Paper: **Recommended for Publication.**

Comments (*Use additional pages, if required*)
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Reviewer's Comment / Report

Research Focus:

The manuscript investigates the contamination levels of two major mycotoxins, aflatoxin B1 (AFB1) and ochratoxin A (OTA), in dried edible caterpillars (Imbrasia oyemensis) that are commonly consumed in Côte d'Ivoire. The study addresses a critical food safety concern related to insect consumption in local diets.

Abstract and Content Clarity:

The abstract effectively summarizes the motivation, methodology, and key findings of the research. It clearly states the significance of the caterpillars as nutrient-rich food sources and highlights the potential risk posed by mycotoxin contamination during processing and drying.

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Quantitative results are presented with specific concentration ranges and comparisons to maximum residue limits (MRLs), providing a clear snapshot of the contamination levels.

Methodology:

The use of high-performance liquid chromatography (HPLC) to quantify mycotoxin levels is appropriate and provides reliable, precise analytical results. The sampling from different geographic locations (Zuénoula, Gohitafla, and Man) offers a representative insight into regional contamination levels.

Results and Findings:

The study reveals that aflatoxin B1 contamination levels in the caterpillar samples exceed the MRL of 2 µg/kg on average, indicating a potential health risk. In contrast, ochratoxin A levels remain below the MRL of 3 µg/kg. The reported concentration ranges and mean values are detailed and informative, supporting the study's conclusions about food safety.

Context and Relevance:

The introduction situates the study within the broader context of entomophagy in Côte d'Ivoire and Africa at large, referencing relevant literature. It underscores the cultural and nutritional importance of edible caterpillars while drawing attention to the sanitary and contamination concerns associated with their preparation.

Scientific Contribution:

This research contributes valuable data on the mycotoxin contamination status of a traditionally consumed insect species, filling a gap in food safety knowledge for edible insects in West Africa. The findings provide a foundation for future food safety regulations and public health strategies.

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Organization and Language:

The manuscript is well-organized, with a logical flow from background through methods and results. The language is clear, formal, and appropriate for a scientific audience. Technical terms are used correctly, and the scientific context is sufficiently explained.

Overall Assessment:

The manuscript presents an important study on the safety of edible caterpillars as a food source, offering quantifiable evidence of mycotoxin contamination that has direct implications for consumer health. The methodology is sound, the findings are clearly articulated, and the study is relevant to food safety, nutrition, and public health disciplines.