



### REVIEWER'S REPORT

Manuscript No.: IJAR-56372

Title: PERFORMANCE EVALUATION OF AN INDIRECT NATURAL CONVECTION SOLAR DRYER FOR OKRA DRYING IN ABÉCHÉ, CHAD.

**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's Comment for Publication.

The manuscript presents the design, construction, and performance evaluation of an indirect natural-convection solar dryer for drying okra under the climatic conditions of Abéché, Chad. The study addresses an important issue of post-harvest losses in arid and Sahelian regions and proposes a low-cost, renewable energy-based preservation solution suitable for rural communities. The topic is relevant to renewable energy applications, food preservation, and sustainable agricultural practices.

The work demonstrates practical applicability and social relevance, especially for developing regions with limited access to electricity. The experimental observations indicate improved drying performance compared to open sun drying, including reduced drying time and better product quality.

However, several minor revisions are required before publication:

1. **Language and Formatting:**  
The manuscript requires careful proofreading for grammatical errors, formatting inconsistencies, repeated numbering, and typographical issues (e.g., spacing, incomplete figure captions, duplicated parentheses, and formatting of equations).
2. **Literature Review Enhancement:**  
The literature review section is relatively brief and should be strengthened by incorporating more recent and region-specific studies on solar drying technologies. Proper in-text citation formatting should also be ensured.
3. **Experimental Details:**  
More detailed information is needed regarding:
  - o Exact experimental duration (number of days, repetitions),
  - o Solar radiation data (if available),
  - o Sample mass and tray loading density,
  - o Measurement accuracy and uncertainty analysis.
4. **Data Presentation:**

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- Figures should be clearly labeled with units and improved graphical quality.
  - Quantitative data (e.g., exact temperature ranges, average drying rate, efficiency calculations) should be presented more systematically, preferably in tables.
  - A clearer comparison with open sun drying based on experimental data (not only literature values) would strengthen the results section.
5. **Moisture Content Formula Clarification:**  
The moisture content equation formatting should be corrected, and variable definitions should be clearly written (replace "Meat Mass" with "Okra Mass").
6. **Reference Section:**
- Reference formatting is inconsistent.
  - Reference [19] appears to cite a very similar work by one of the authors; potential self-citation should be clarified.
  - DOI formatting should be standardized.
7. **Technical Depth:**  
The study would benefit from including drying efficiency calculations, drying rate curves, or basic thermal performance indicators to improve scientific robustness.

Overall, the manuscript is relevant and practically valuable but requires minor technical and editorial improvements to enhance clarity, scientific rigor, and presentation quality before it can be accepted for publication.