

# Review of: "Assessment of Quality, Bacterial Population and Diversity of Irrigation Water in Selected Areas of Minna, Niger State, Nigeria"

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Potential competing interests: No potential competing interests to declare.

Greetings! [11/5/2024]

Reviewer: Dear authors,

Thank you for the opportunity to review your manuscript.

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***Accepted with Major revisions***

## **My Overall Evaluation**

Reviewer #1: I read carefully the manuscript entitled: "*Assessment of Quality, Bacterial Population and Diversity of Irrigation Water in Selected Areas of Minna, Niger State, Nigeria*" and diversity of irrigation water in selected areas of Minna, Niger State, Nigeria," is indeed important, and especially for contexts in the water quality field, this theme should indeed receive greater attention. To that end, I would like to thank you for bringing together this write-up on this issue. However, the paper is challenged on many fronts with regard to the implementation of this larger objective:

- The article title is deemed appropriate.
- The abstract requires revision, as it is currently succinct and should adhere to a standard format. It is recommended to present the results in a clear manner. The abstract should articulate five key points:
  - Rationale (1-2 sentences): Explain why the research was necessary.
  - Objective (1 sentence): Specify the aim of the study.
  - Method(s) (up to 3 sentences): Briefly summarize the parameters measured.
  - Results (up to 4-5 sentences): Clearly outline the findings with supporting data.
  - Conclusions/Recommendations (1 sentence): Propose actions based on the findings.
- Keywords are acceptable.
- The introduction needs expansion, with a focus on recent developments in the field. The novelty of the work should be established, and the purpose or significance explicitly stated.

- Include a heading for the information on world water quality standards after the objectives, using the latest reference instead of FAO, 1995.
- Consider incorporating a dataset, presented in tables, charts, or graphs, to illustrate field conditions. Ensure that the information is evidence-based, supported by proper citations.
- Address grammatical issues throughout the paper to enhance clarity. Proofreading is recommended, and assistance from colleagues or friendly reviewers can be sought.
- Use transitional words to establish clear connections among ideas. Ensure accuracy in symbols, signs, and notations, such as the Celsius symbol and oxygen.
- Write the H<sub>2</sub>S Test and O<sub>2</sub> Relationship Test in full.
- Provide additional information on potential sources of contamination in each location to enhance the practical implications of the results.
- Discourage the use of different font sizes for harmonization.
- Under Treatment and Experimental Design, rephrase: "Treatments are sewage water from locations practicing irrigation."
- Provide context to the research in the Author Methodology section. The author's research methodology is currently presented sufficiently for better understanding, with clear descriptions of the methodologies used.
- Separate the Discussion section from the Results.
- In the Discussion section, follow this structure: i. Main findings of the present study ii. Comparison with other studies iii. Implication and explanation of findings iv. Strengths and limitations v. Conclusion, recommendation, and future direction.
- Address the abundance of rhetorical and common knowledge content lacking proper referencing.
- Add specific value, problems, challenges, recommendations, and implications to the conclusion, which are currently lacking.
- Revise and improve in-text references for clarity and accuracy.
- **Significant Statement:** Please write the significance statement as follows: "This study discovered the ---- that can be beneficial for ---- and last sentence of this statement could be as: this study will help the researchers to uncover the critical areas of ---- that many researchers were not able to explore. Thus, a new theory on ----- may be arrived at".

This suggestion would strengthen the study further and when addressed, will improve the manuscript.

Best regards,

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