

REVIEWER'S REPORT

Manuscript No.: IJAR-52185

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Title: IMPACT OF POLLUTION ON THE PHYSICAL, CHEMICAL, AND BACTERIOLOGICAL PARAMETERS OF DRINKING WATER FROM SEVERAL WELLS IN THE MUNICIPALITY OF KANKAN (GUINEA).

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: Tahir Ahmad

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

Comments (*Use additional pages, if required*)

Reviewer's Comment / Report

Abstract Review:

The abstract presents a clear and structured overview of the study's purpose, methodology, key findings, and public health relevance. The work is focused on a critical issue—access to safe drinking water—in a specific geographical context marked by infrastructural and environmental challenges. The methodological rigor is evident through the use of standardized techniques (e.g., NF T 90-008, NF EN 27888), and the quantitative results are concisely reported. The link between environmental conditions and contamination is appropriately acknowledged. The

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abstract ends with a strong implication that unsanitary surroundings correlate with contamination levels, offering a coherent summary of the problem investigated.

Introduction Review:

The introduction effectively frames the global and regional importance of water access and sanitation. References to WHO data and major global initiatives, such as the Millennium Development Goals, establish the broader significance of the study. The inclusion of contextual data from Guinea, including rainfall levels, urban–rural disparities, and household water source statistics, helps to localize the issue in a meaningful way. Citations from recent and relevant reports (e.g., Sagno 2023, MEEF 2016) contribute to the introduction's timeliness and relevance. The historical and socio-environmental framing offers insight into the complex dynamics affecting water access and quality in Guinea.

Methodological Review:

The methodology section outlined in the abstract is robust and well-structured. It incorporates environmental observation along with physicochemical and bacteriological analyses, ensuring a multi-dimensional assessment of water quality. The use of standardized methods for determining parameters such as pH, turbidity, conductivity, and ion concentration lends credibility to the data collected. The choice to analyze both chemical and bacteriological contaminants demonstrates an awareness of the broad spectrum of water pollution risks. The focus on 20 wells provides a manageable yet statistically informative sample size for the locality of Kankan.

Results Summary Review:

The findings are clearly articulated, with numerical ranges and comparative references to WHO standards. This allows for an immediate understanding of which parameters pose a concern. The data reveal varying degrees of non-compliance, especially concerning turbidity and phosphate ion levels, as well as bacteriological contamination from total coliforms. The results highlight the heterogeneity in water quality among the wells tested. The identification of

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potential links between well hygiene and contamination supports the broader public health implications of the study.

Scientific and Public Health Significance:

The study addresses an urgent need to monitor and improve water quality in under-resourced regions. Its implications span environmental science, public health, and policy. By correlating pollution indicators with well sanitation, the paper contributes to evidence-based discussions on water safety. The work aligns with global priorities in sustainable development and environmental justice, particularly in the context of the UN Sustainable Development Goal 6 (Clean Water and Sanitation).

Language and Presentation:

The language is precise, scientifically accurate, and appropriate for an academic audience. Technical terms are used correctly, and the manuscript maintains a formal tone throughout. Tables, figures, or expanded datasets (presumably included in the full paper) would further enhance the presentation of the findings. The manuscript appears structured according to journal norms, with manuscript history and keywords included.

Evaluation Summary:

This manuscript presents a valuable contribution to the study of water quality in sub-Saharan Africa. It combines environmental assessment with rigorous laboratory analysis, delivering actionable insights into the state of drinking water wells in Kankan. The findings highlight the urgent need for ongoing monitoring and interventions to ensure access to safe drinking water. The study has significant implications for environmental health, policy formulation, and public awareness in Guinea and comparable regions.
