

# Review of: "Assessment of Quality of drinking waterbased on the water quality index method in Hawassa Zuria Woreda, Sidama Regional State, Ethiopia"

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Potential competing interests: No potential competing interests to declare.

Dear Author,

The MS titled "Assessment of Quality of drinking water based on the water quality index method in Hawassa Zuria Woreda, Sidama Regional State, Ethiopia" has been reviewed. The study presents an interesting and relevant topic, used WQI, to discuss water quality of samples collected from various sources in Hawassa Zuria Woreda.

The manuscript is revised for some major corrections as there are some shortcomings in it. Please pay attention to the following corrections as follows:

1. In 3<sup>rd</sup> line of last paragraph of Introduction section, it is mentioned that "in researcher's knowledge there hasn't been any study on drinking water quality assessment using water quality index" which is not correct. There are lots of studies available at global level to estimate the water quality of different sources using WQIs. Please correct this statement or specify it.
2. In Material and methods section, under sub-heading Water samples collection and storage, please use subscript option to write HNO<sub>3</sub> and check at all places in complete manuscript. Even all chemical formulas of variables such as PO<sub>4</sub><sup>3-</sup>, NO<sub>2</sub><sup>-</sup>, Mg<sup>+2</sup> etc. also should be written properly. Please check OC in second para of same sub-heading.
3. Please elaborate the preservation practices for bacteriological tests also.
4. Please provide the detection limit of FAAS used to estimate heavy metal concentrations.
5. In WQI methodology, why only 11 variables were used in WQI calculation. Please mention. The citation (WHO 2011) used for this sentence, is not true. There are lots of WQIs globally with their specific methodologies, conditions and a proper identity by the name of developer or organisation. Please mention which exact WQI was used in this manuscript and all related information. For more clarifications following article could be considered:

<https://doi.org/10.1007/s11356-021-13711-1>

<https://doi.org/10.1007/s11356-023-27419-x>

6. All abbreviations like FC, TC etc. should be written in full form at very first place in the complete manuscript.
7. MS excel is not written at correct place. Please correct it.
8. The use of t-test is not clear in data analysis sub section.

9. Replace mg/l with mg/L at all places in complete manuscript.
10. In interpretation of WQI, how author could claim that variables like Turbidity, Fluoride, Ammonia, Lead, Nickel, and Electric Conductivity had the biggest effect on the range of estimated WQI????

Please elaborate the WQI interpretation.

11. Please check the citation (Javaid et al., 2008). (Ali et al., 2019) whether written correctly or not.
12. Please check for correct citation in complete manuscript. There are some missing citations in sentences like as below:

“Comparing the concentration of Zn to the WHO recommended value revealed a significant disparity. (2017).”

13. The meaning of the following sentence is not clear. Please correct it and check for its citation too.

“Water of excellent quality does not present a threat of deterioration, and when the quality is acceptable, it is minimal (CCME, 2001).”

14. The proofread of the manuscript is required by the author and native English speaker.
15. The bibliography is not in same format.
16. Tables and figures were not available in the manuscript.