

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.

The overall manuscript is a good study on water quality index studies and heavy metal analysis on the water samples in Ethiopia. I recommend this article for publishing after incorporating the following changes/ suggestions in the article.

1. **The title should be precise and more meaning full, current title is too long and non cognitive.**
2. Background: **The line should be amended as;** Ethiopia is one of the Sub-Saharan African developing nations that encounters difficulties in delivering freshwater services to its inhabitants. **And following lines should also be amended as;** This is partly due to the deprived access to clean water in distribution systems. This study was to conduct an Assessment on Quality of drinking water; based on the water quality index method in Hawassa Zuria Woreda, Sidama Regional State, Ethiopia.
3. **Methods.** five samples from the reservoir (**which reservoir?**),
4. **Results.** Zn>Ni>Co>Cu>Mn>Fe>Pb (**How this order was analyzed? Did you use any spectroscopic method, if yes list its working?**).
5. **Conclusion.** This research strongly suggests that drinking water from heavy metal-contaminated sites should be outlawed and that lead and nickel removal should receive special attention from the appropriate authorities. (**what is the novelty/significance of the study?**).
6. **Also provide continuous line numbers in your manuscript.**
7. **Avoid grammatical errors and double check the references.**
8. **Give an electronic number to each main and subordinate headings.**
9. **Introduction: First two paragraphs needs to be further refined with properly synthesized sentence structure.**
10. **Paragraph four discussing heavy metals should be more elaborated in terms of contamination and consequences on living organisms. The may take help by including following literature:** Hayder, R., Hafeez, M., & Zaheer, M. (2022). Challenges for sustainable water use in the northern part of Pakistan focusing on hydrology assessment of non-industrial zone. *Journal of Cleaner Production*, 349, 131166. **And** Hayder, R., Hafeez, M., Ahmad, P., Memon, N., Khandaker, M. U., Elqahtani, Z. M., ... & Ahmed, M. N. (2023). Heavy Metal Estimation and Quality Assurance Parameters for Water Resources in the Northern Region of Pakistan. *Water*, 15(1), 77.
11. **The authors must indicate some remedies used to overcome the process and may include seminal updated references.**
12. **In materials and methods section three temperatures were mentioned as average, minimum and maximum,**

but only two temperatures are mentioned.

13. Water Sample Collection and storage: The third type of samples were acidified and preserved with HNO_3 (subscript) for ion and heavy metal analysis from the boreholes, reservoir, and tap water. Water sampling and preservation techniques followed the standard preservation (APHA, 1999). The samples were collected between 7:00 and 8:00 in the morning (which season or month?).

The samples acquired for the heavy metals assay were preserved right away with concentrated HNO_3 (subscript) to a pH value of 1.5. (APHA, 1999). In order to prevent contamination and the effects of light and temperature, these sample bottles were sealed and kept in a dark environment at a constant temperature range of 4-10 °C (did not give any meaning?) for the duration of the 48-hour physico-chemical examination.

1. AAS has been used for heavy metal analysis; why not ICP-OES or ICP-MS be used for more updated and authenticated results ?
2. In eq.1 what are I , w_i and x ?
3. In eq.2 what are Q_i and S_i ?
4. In eq.3 what are n , I and H_{\max} and what is H_{mac} ?
5. Microbial Analyses; Using a membrane filter (0.45 μm (what is meant by this unit)) and a vacuum filtering apparatus, a 100 ml water sample was filtered.
6. Mentions tables and figures in chronological order in text where needed its hard to go table 4. First and then table with numbers such as 1,2 and 3.
7. Check for units correction and digit corrections in the whole manuscript.
8. Some decontamination methods must be discussed for the problems and for future studies.
9. Not a single table or figure is listed in the manuscript? There must be proper mentioning of tables and figures in the manuscript with proper labelling and numbers. The numbers for tables and figures are miscited.