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.

1. **Introduction**

- Second paragraph of the introduction: "*Sub-Saharan African countries are at the front of the water scarcity problem, one among which is Ethiopia, despite the fact that the country has abundant groundwater, major lakes, and large volumes of rainfall (WHO and UNICEF, 2019)*": ***Comment: In a context like this, is it really about scarcity or the availability of good quality water*?**
- Last paragraph of the introduction: "*Therefore, the main aim of this study was to investigate the levels of heavy metals such as Mn, Pb, Zn, Co, Cu and Ni*": ***Comment: Missing from this introduction is a justification of why the authors think the water in this area would be contaminated by these metals. What would be the source of these metals? Please insert a paragraph justifying this***.

2. Description of the study area

Penultimate line: "*In the study area, the water source for drinking is obtained from the two boreholes*": ***Comment: The location of these boreholes needs to be clearly described: what is in their immediate vicinity? houses? factories? fields using chemical fertilizers? In an article like this, it's all very well to demonstrate that the water is contaminated, but it's even better to specify the sources of contamination***.

The quality and relevance of figures and tables are difficult to assess because they are inaccessible in the available manuscript.

3. Water samples analysis methods

Last line: "*Stock standard solutions (Buck Scientific purographics calibration standards, USA) containing 1000 mg/L of the metals Mn, Pb, Zn, Co, Cu, and Ni were used to create calibration standards for each metal*": ***Comment: That's one precision too many***.

4. Instrument Operating Conditions and calibration

Comment: I propose that this section be removed. It only weighs down the manuscript, but is not really necessary for its content.

5. Results

5.1. Physico-chemicals parameters

- Last line of the first paragraph: "*However, the differences in the mean temperature of the reservoir, tap water and point of sampled sites were not significant at the p <0.05 significant level*". ***Comment: In this case, you need to enter the true p-value to show that there is no significant difference. And that's true everywhere in the text where it's the same***.
- Third paragraph: "*….the highest EC (658.41µS/cm) was recorded from end users (Household Containers) whereas the lowest conductivity was recorded from the sample obtained from Reservoir (619µS/cm) and Tap water (622.25µS/cm). Nevertheless, the differences in the mean EC of the source, reservoirs, tap water, and households' container were not significant at p=0.05 significant level*". ***Comment: Normally, if the statistical test shows that there is no significant difference between the values, there's no need to say that such and such a value is superior and such and such is inferior. I therefore propose to rewrite this sentence and do the same wherever this is the case***.

5.2. One sample t-test comparing the means of the parameters with WHO parametric values

"*A highly significant difference (p 0.01) was found between the manganese concentration found in the samples gathered and the WHO's recommended values. When compared to the number recommended by the WHO, the lead concentration was not significant. Comparing the concentration of Zn to the WHO-recommended value revealed a significant disparity. (2017). Similar to this, an extremely significant difference (p0.01) between the samples' Copper, nickel, and iron drinking water concentrations and the recommended values was observed*". ***Comment: Unless I'm mistaken, I don't think there's much point in making a statistical comparison here. When it comes to the potability of water, it's just a matter of seeing whether or not the value obtained for a parameter falls within the range of standard values***.

6. Discussion

General comment: What's missing from this discussion, for the various elements analyzed in the water samples, are details of the sources of these pollutants and the measures needed to put an end to these polluting sources. Thank you for discussing this aspect.