Reviewer's report

Title: Excessive fluoride in portable water sources in Bondo-Rarieda area of Siaya county, Kenya

Version: 2
Date: 19 December 2013

Reviewer: Fakir Yunus

Reviewer's report:

Major Compulsory Revisions

1. Title: This paper evaluated the fluoride level in potable water sources in different parts of Kenya however the author mentioned in the title that Excessive fluoride in portable water sources which may mean that the author have prior information of high level of fluoride in water before conducting the study. I would suggest to change the title.

2. In the background paragraph:

2.1: The author should consider writing more about fluoride and its health effect at the very beginning of the background and then should write that there were limited research had been conducted so far.

2.2: The author did not properly explain the beneficial effects of adequate fluoride and adverse effects of excess fluoride on health in the background. To justify the research the author should consider writing more about the health effect of fluoride, not only dental fluorosis.

2.3: The author should explain more details on why he chose to study in Bondo-Rarieda area of Siaya county, Kenya. Is there any previous evidence of high fluoride in water in that part? If not, should explain how the author hypothesized?

3. Method section:

3.1: Study area: The author should consider adding few more point in the study area. For example, how many divisions are there i.e Bondo-Rarieda area of Siaya county, Kenya. how many water sources and what are they and what are the principle water sources for drinking?

3.2: Study duration: The author should write the study duration.

3.3: Sampling site: The author should focus the following questions:

3.3.1: How the author chose to collect various water samples from 5 divisions?

3.3.2: How the author got the number of collected samples from each study site?

3.4: Sample Size: How the author chose to take 127 water samples.
3.5: Sample collection: The author mentioned that he collected water sample from different types of water sources, but did not mentioned what are they in the article (except in the table)? The author should consider writing the different types of water sources from where he collected 127 water sample.

3.6: Data analysis: The author should mention the software that he used for data analysis.

4. Result and discussion section:

4.2: The author concluded that 40% of the children <10 years are at risk of developing dental fluorosis. However, the author did not properly explained how he came up with this conclusion. The author should explain that why only the children are at risk, why not others in the community?

Minor Essential Revisions

1. Result and discussion section:

1.1: Topographical variation: The author mentioned that topographical variation were presented in Figure 2, however the author explained it in Figure 3.

2. Constructing table: In Table: 2: The author should consider constructing table as Mean±SD.

Discretionary Revisions

None

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.