

## ***Interactive comment on “Do low-cost ceramic water filters improve water security in rural South Africa?” by Jens Lange et al.***

### **Anonymous Referee #1**

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General comments: The paper reports on the performance of low-cost ceramic filters (CCFS) for improving water security in rural South Africa. This is an interesting topic considering the challenges faced by rural communities in South Africa and many other developing countries where point of use devices such as CCFS could aid in improving access to potable water in these areas. There is dire need for knowledge of the performance of such point of use devices for informed decision making while promoting the same.

Specific comments: 1. Page 2, lines 12-14-what have been the general trends in levels of acceptability of the technology, affordability, reliability in terms of amount water generated per day and willingness to pay for the CCFS in rural communities especially where these have been promoted by Du Preez et al., 2008 and Mwabi et al., 2013?

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2. Page 3, line 10 is not clear. Please consider revising.
3. Section 3.1 does not sound like methodology rather a general description of the CCFS. Authors are better off explaining what was actually done with the CCFS.
4. Page 3, line 24-Did the authors also use the BiopadesLite<sup>®</sup> software to evaluate the performance of dip slides in detection of the coliforms? This is not coming out very clear here.
5. Page 4, lines 18-which type of bacteria were analysed to evaluate the performance of the NUT/AMC Dip slides in the field? What can you say about issues of bacterial regrowth in relation to issues of maintenance and performance of the CCFS?
6. Page 5, lines 2-3-which statistical test was performed to test the significance differences between the filling scenarios or immediate effects of different loading concentrations? At what significance level?
7. Page 5, line 11-what were the remaining 74% households without toilets using? Were they practicing open defecation? This might definitely have been contributed to the high levels of fecal contamination in water sources in the area. Are there any behavioral change interventions being done in the community?
8. Page 6, line 21-what platform is used for silver impregnation to improve strength and avoid silver being washed out during repeated loading of CCFS? The silver washed out could have a pollution effect as well.
9. Page 6, line 26-what is the shelf life of the CCFS? How do you explain the aging with respect to shelf life and problems arising from the maintenance of CCFS?
10. Figure 5-please label the y-axis and extend the axis so that even the value for the 'spring only' is easier to read from the axis.

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