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Drinking Water
Engineering and Science
Discussions

Interactive comment on "Study on the antibacterial activity of selected natural herbs and their application in water treatment" *by* P. S. Harikumar and C. M. Manjusha

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The manuscript entitled, "Study on the antibacterial activity of selected natural herbs and their application in water treatment" by P. S. Harikumar and C. M. Manjusha explored the role of natural herbs in non-conventional water treatment method. It's a known fact that the natural herbs discussed here are medicinal plants and have antibacterial properties. The aim of the paper is clear and straightforward but I have some suggestions: 1. Abstract needs to draft again, especially from line 18-23, page 200. It has more qualitative statements. Please add some results in quantitative forms here. 2. Lines 5-19, page 201. Most of the introductory material used here can be deleted

as it breaks the continuity of the manuscript. The authors may say that investigation of antibacterial properties of natural herbs as an alternate to chemical treatment is the need of the hour to prevent DBPs formation. 3. Line 16-18, page 201. The objective of the present work is lost somewhere. Its not clear that what the authors wish to discuss here, the alternative antimicrobial drugs for the treatment of infectious diseases from medicinal plants or antibacterial properties of natural herbs and their application in water treatment. I think, the authors should focus the later part only. 4. Methodology, lines 20-25 page 201. Clarify the details of extract preparation with quantitative values. How much ml of extracted was derived from each herb and/or any water was added during extract preparation or so?? 5. Be consistent and use the similar abbreviation every time. Note line 15, page 202, Serratia sp., and Bacillus spp. The same has been repeated twice in lines 5-8 page 206. Is it deliberately or misspelled. 6. Lines 23-25 page 202. A quantity of 15mL (3 teaspoons) of herbal extract was added to 100mL of water samples and was then subjected to bacteriological analysis. It means 15% solution of herbal extracts will definitely imparts the physic-chemical properties of drinking water especially color and taste which will further decrease the public acceptance. I feel, addition of plant extract from Azadirachta indica may give the bitter taste to the potable water. Authors should give the details in tables about the addition of different plant extracts and public acceptance. 7. Lines 15-23 and 23-26 page 205. Very long sentences. Very difficult to understand the findings. Authors may support the text with the relevant tables here. 8. Page 205-206 the authors found that the shelf life of Ocimum sanctum herbal extract was detected as 16 days. I wonder how the absorbance reduced to nearly zero on 16th day, however upto 15th day, it was more than 2 (figure 12). Under natural conditions, degradation is a continuous process. Please clarify or give supporting references. 9. Line 26-30, page 206. Please support your finding with relevant references. 10. Discussion part is completely missed in the manuscript. The authors have only reported the observation. They should support their finding with relevant literature.