

Drink. Water Eng. Sci. Discuss., referee comment RC2
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Comment on dwes-2020-35

Anonymous Referee #2

Referee comment on "Defluoridation of drinking water by modified natural zeolite with Cationic surfactant, in case of Ziway town, Ethiopia" by Dessalegn Geleta Ebsa and Adisu Befekadu Kebede, Drink. Water Eng. Sci. Discuss.,
<https://doi.org/10.5194/dwes-2020-35-RC2>, 2021

The paper is about the removal of fluoride with modified zeolites. This is an important topic, since fluoride contamination of drinking water is a serious problem in the region where the study was conducted. However, the quality of the paper is low. The set-up of the experiments have drawbacks, the analysis of the results are weak, the use of references for the discussion of the results is poor, and the manuscript has severe language issues.

General comments:

- Let the language be checked by a native speaking person
- Explain at the end of the introduction, what is the "knowledge" gap, what is the "objective" of the study and how does it "contribute" to science/engineering.
- Explain why the use method of modification is chosen (based on literature), what other modifications are possible?
- Batch experiments should have been performed in the form of Isotherms (varying concentration of dosages) to determine adsorption capacity.
- Now only "kinetic" tests are performed with a fixed dosage
- The data in the figures do always not reflect the values given in the text.
- Avoid representation of same data different Figures (e.g. 7 and 8)
- Although it was mentioned that column test were performed too, the results only reflect the batch tests.
- Check numbering of (and reference to) figures.
- Use literature to discuss the results (how do they compare to other studies)
- Do not use "runtime" for batch tests
- Do not use "significant" when no statistical analysis is performed.

Specific comments:

- Line 48, what are these "natural characteristics"? explain
- Line 67, not needed to give the coordinates
- Line 82, ORII and MB?
- Line 85-89, not needed to explain
- Line 90-94, not further used in the analysis of the results
- Line 127, check numbering of the sections (4.2 should not be a separate section)
- Line 151, the value does not correspond to Figure 2.. (from 10 mg/L to 8 mg/L is not 88% removal), see general comment and check entire document
- Line 160, how is it concluded that the surface is hydrophilic?
- Line 163-164, too obvious statement => delete
- Line 194, difference is very small and conclusions cannot be drawn
- Line 212-217, see comment above..
- Line 230-234, values shown in Figure 7 do not compare to data presented in the other Figures..