

Reviewer 2 *This manuscript is about creating a new model the thermodynamic equilibrium between coexisting phases of the gel and supernate aqueous solution.*

1. *Abstract needs to re-write as and please follow the IMRAD instruction.*

We have rewritten the abstract. We believe that the abstract is much more attractive now.

2. *There is introduction in the abstract, however, it needs to write more about the aim of this work, method, result and conclusion.*

Corrected

3. *Avoid to use word 'we' in the abstract as well as manuscript.*

Corrected.

4. *line 247 in what table?*

We meant Table 1. Corrected in text.

5. *Where is the method of this work?*

The method idea is outlined in the paragraph "Physics behind the desalination process" and described in the section "Model and methods".

6. *It is suggested that to carefully improve this manuscript as well as the writing and grammatical error.*

We improved the writing style of the manuscript and corrected the grammatical errors.

7. *Please explain more detail about the process, how the process run and how the data could be explained and become more interesting for reader.*

Added corresponding paragraph in "Model and methods " section