

## Comments for authors

In this manuscript, the authors carried out the extraction of chitosan with a high degree of deacetylation from the shrimp shells, followed by preparing a superabsorbent polymer material from the extracted chitosan. The best conditions for producing this material were studied. Moreover, the material's ability to hold onto water to support the chili plants was tested. The contents, figures, and tables were displayed clearly and well discussed. The topic is interesting and has high potential application in various fields, especially the agricultural sector. Therefore, this manuscript could be considered for publication in the journal after some revisions are required.

### Comments on this manuscript

- (1) In the introduction, the author should clarify “what are superabsorbent materials?”
- (2) I thought that the authors should revise this comment “Therefore, in this study, we extract chitosan for SAP manufacture utilizing "shrimp shells," a waste product that is typically discarded and has a significant risk of creating environmental damage, rather than starch” because most shrimp shells are used as a initial source to produce chitosan and other products. Therefore, shrimp shells are not waste to environmental damage.
- (3) In experiments, the authors should describe the methods to determine the deacetylation degree of CS-DD and the water adsorption of the materials in detail.
- (4) There are potential issues about the environmental impacts due to the use of a large NaOH dosage during the process to produce chitosan. Therefore, some comments should be added to overcome this problem.
- (5) The recovery performance of chitosan from the shrim shells and the total efficiency for producing the materials based on the processes should be provided.
- (6) The benefits and drawbacks of this material should be discussed and compared with other previous works.
- (7) The references in the analysis of materials, such as FT-IR, XRD, etc., should be added to increase the reliability of the studied data.
- (8) In Tables 1 and 2, for OCMCS-SAP sample after adsorption, why is the final mass higher than the initial mass?
- (9) The format of references should be rechecked.