

Review of: "Developing A Novel Solvent System to Isolate Plant Pigments of Different Polarities Using Thin Layer Chromatography"

Shahla Shahriari¹

¹ Islamic Azad University, Shahr-e-Qods Branch

Potential competing interests: No potential competing interests to declare.

Dear Authors,

Below, I have endeavored to offer my perspectives and suggestions aimed at enhancing the quality of your research paper. It is my sincere hope that my input contributes to the improvement of your work.

1- Sentence structure: some manuscript sentences are very long and can be divided into shorter sentences for better readability. Please try breaking it into two or three sentences to make it clearer.

2- Please edit this sentence in the abstract: "Using a mixture of hexane:ethyl acetate:acetone:isopropyl alcohol:water = 6:1:1:1:1 as the mobile phase, we were able to obtain a TLC, where spots are distinctly separated, concentrated, and could easily be isolated".

3- Introduction: The sentence "The latter studies involved multiple steps, expensive instruments, more solvents, and sometimes corrosive or hazardous chemicals such as acids, and were not very cost-effective" can be simplified for better readability. Consider breaking it down into shorter sentences or rephrasing it to avoid excessive repetition of the word "and."

4- Please rewrite the first paragraph of the introduction section to present the information in a distinct manner compared to the first four lines of the abstract. Please rearrange the sentences and correct some phrases to avoid repetition.

5- Last paragraph of introduction: In the second sentence, the phrase "under normal circumstances" is not necessary and can be removed without changing the meaning of the sentence. For example: "We also wanted to ensure that the chemicals being used were not threats to health."

6- It is recommended that the authors provide additional explanations in the introduction section to support their claim that the chosen solvent system is novel. By providing more details and context, readers can better understand the novelty and uniqueness of the solvent system. This could include discussing any previous solvent systems used for pigment separation, highlighting the limitations or drawbacks of existing methods, and explaining how the proposed solvent system addresses those limitations. Additionally, the authors can mention any specific modifications or improvements made to the solvent system compared to previous studies. By elaborating on these aspects, the authors can strengthen their claim

and provide a clearer rationale for the development of their novel solvent system.

7- Materials: The list of specific solvents used in the mobile phase is more detailed. For example: "Solvents, including [name of solvent, purity, etc.]

8- Please mention the operating temperature and pressure in the method section.

9-Plant pigment extract preparation: Please complete the method section, eg did you filter the extracted solution?

10- Please shorten the conclusion section, it is too long.

11- Specificity in solvent composition: when mentioning the solvent composition, it would be helpful to provide the actual values rather than just the ratios. For example, instead of "a mixture of hexane:ethyl acetate:acetone:isopropyl alcohol:water = 6:1:1:1:1," you could provide the specific volumes or percentages of each component.

12-In my opinion, the conclusion section should be revised to focus on the main result of the research.

13- Results: Please indicate the appropriate abbreviation to clarify whether the reported percentages for the solvent are in volume (v/v) or weight (w/w).