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LETTER TO THE EDITOR

Rebuttal to the Arguments in the Letter to the Editor: Improvement May be Possible

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Dear Editor,

Thank you for giving us a fair chance to explain and defend the integrity of our work from the allegations pointed out in the letter to the editor, "Improvement May Be Possible." We hope the editor will kindly refer to the questions brought up by the reviewers for our manuscript, regeneration and reutilization of oil-laden spent bleaching clay via in situ transesterification and calcination and our answers to them before deciding whether the arguments put up in this letter are valid. We find that the arguments here do not appreciate the essence of the paper itself that reports on one of the ways to reuse an industrial waste that is causing many environmental problems for the palm oil industry.

The authors in good faith have put forward our rebuttal for almost every paragraph of the letter to the editor. We hope our hard work in the laboratory will not be undermined by mere theoretical knowledge of what should have been that does not reflect on the current technologies available in oil refining.

Extracted from the Letter

The authors determine the oil content of the SBC by first of all drying the sample that can be quite old in an oven at 103 °C for 2½ h. Then they add petroleum ether (60–80 °C), homogenise, centrifuge and decant and they repeat this three times. They evaporate the combined petroleum ether extracts to dryness and calculate the oil content of the SBC from the weight of the evaporation residue. They also used butanone as solvent with almost identical results and claim their methods to be much faster than a Soxhlet extraction.

Rebuttal

- Firstly, the SBC sample was collected from the industry and kept at 4 °C in glass bottles.
- Before drying the sample in the oven, SBC was removed from the refrigerator and desiccated to room temperature.
- These steps lessen further deterioration of the oil contained in SBC.
- Then, the authors would also like to point out that after adding petroleum ether and homogenizing the mixture, it was heated in a water bath at 55 ± 2 °C for 1–2 min before centrifugation for 10 min. The method was repeated three times (including the heating). Homogenizing and heating repeatedly helps to dislodge the adsorbed oil better than the normal solvent extraction step. This step was left out in the letter to the editor.
- If done carefully step by step, the stated amount of oil can be extracted as reported in our paper.
- We would also like to draw your kind attention to the fact that although 24–27% of oil was recovered, Boey et al. [1] reported that double Soxhlet extraction with solvents of different polarity is necessary to obtain approximately 34% of extracts (polar and non-polar) from the SBC.
- In this paper, we are only interested in the non-polar component, in this case the oil for transesterification.

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