

Referee Report: Reviewer 2

Egusphere-2022-499: DMS cycling in the Sea Surface Microlayer in the South West Pacific: 1.
Enrichment potential determined using a novel sampler

I thank the Authors for their response to my comments and suggestions. I know there were many as I took the time to review this work to the best of my knowledge and with the care that it deserves. The authors have addressed most of my comments carefully, however, it was frustrating to see that the line numbers in the authors' response did not match the line numbers in the revised manuscript nor in the tracked changes document, which make the revision process tedious.

I thank the authors for taking my comment on repeatability versus reproducibility into account. However, the following comment was only partly answered by the Authors. As this was one of my main concerns in regards to accepting this manuscript for publication, I would really appreciate the authors to reply fully to this comment and/or amend this point in the manuscript:

Reviewer's comment: Line 139 (**145 of revised manuscript**): I am questioning the validity of this equation. **Reproducibility is usually measured as the standard deviation of the difference between multiple measurements. Please provide source for equation 3.**

Also, the term "reproducibility" is commonly used when comparing the difference in measurements from different laboratories using the same technique whereas "repeatability" is more commonly used to describe the difference in measurements between different techniques within the same laboratory.

Also, it would be good here to give the level of replication, which I believe is 5-6 based on paragraph 211-221 (220-230 of revised manuscript).

Author's answer: The reviewer is correct that "repeatability" is a more correct term for our estimate of method precision, which describes the relative percentage difference between a pair of repeated measurements, and so we have corrected this throughout.

L145 now say "the repeatability, estimated as the relative percentage difference between a pair of repeated measurements, for the gas-permeable tube....."

Although in both cases, the smaller the number, the higher the repeatability, and the higher the reliability of the results, this is a non-conventional way of reporting repeatability. Therefore, this should either be amended or a valid source should be provided for equation 3.