

Biogeosciences Discuss., community comment CC3
<https://doi.org/10.5194/bg-2021-223-CC3>, 2021
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Reply on RC2

Hanni Vigderovich

Community comment on "Long-term incubations provide insight into the mechanisms of anaerobic oxidation of methane in methanogenic lake sediments" by Hanni Vigderovich et al., *Biogeosciences Discuss.*, <https://doi.org/10.5194/bg-2021-223-CC3>, 2021

We would like to thank the reviewer for this helpful review. We appreciated the comment that the experimental design was thorough and feasible, as indeed we tried to cover all the potential electron acceptors and scenarios.

We agree that the paper focused on presenting and interpreting geochemical data and that we should present the microbial results in more detail. As the reviewer suggested, we are adding in the revised version to the main text a microbial section with a visual representation of DNA-based results and integrated it better with lipid and geochemical analyses.

We also agree that we should supply more details on the methods so every treatment should be reproducible, and we are clarifying the methods in the revised version. As we did not have replicate to the black coffee treatment, and it was not clear enough, we decided to remove this experiment from the paper, as both reviewers suggested.

As mentioned above, we are working to improve the structure of the paper, to clarify and simplify the paper all along. All co-authors are involved in editing the manuscript and we will also have final English editing. We will upload the revised version with the detailed response to the specific comments soon.