

Interactive comment on “Validation of carbon isotope fractionation in algal lipids as a PCO_2 proxy using a natural CO_2 seep (Shikine Island, Japan)” by Caitlyn R. Witkowski et al.

Anonymous Referee #2

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I have two comments that warrant further clarification by the authors:

Regarding combustion of filters: The authors should provide literature evidence for their statement that the target compounds would be completely degraded after 3h at 300 °C. I have a hard time believing especially that phytol would combust to completion under these conditions (which are not too different from the GC conditions used by the authors).

Regarding literature pCO₂ values: After perusal of Agostini et al. (2015, 2018) and Harvey et al. (2018) it is still not clear to me how the authors derived at the presented pCO₂ values. The pCO₂ data presented in the former studies show high variability

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both temporally and spatially, which should not be disregarded in the present study.

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