

Interactive comment on “Filtering artefacts in bacterial community composition can affect the outcome of dissolved organic matter biolability assays” by Joshua F. Dean et al.

Anonymous Referee #1

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This is overall a short but relevant manuscript, that provides experimental data on DOM degradation of surface waters under different filtration conditions.

-“DOM carbon concentrations” is odd and confusing – I suggest to use “DOC concentrations”

-The description of DOC temporal variations in the experiments (Figure 1) is perhaps not very convincing. Based on many published degradation experiments, one would expect to see exponential losses, the smoothing approach here is odd.

-DOC concentrations were measured using a TOC-IRMS setup, it is unfortunate that $\delta^{13}\text{C}$ data are not presented, these could have a strong added value to the manuscript

and would allow to expand the discussion with other published studies looking at changes in $\delta^{13}\text{C}$ during microbial degradation, or to shed some light on the suggestions that an initial (small) increase in DOC could be due to nitrification.

-It would be good to include some discussion/references on how the filter pore size might (or might not) affect the DOC concentrations and characteristics. As a starter, both papers below demonstrate no significant differences in DOC and $\delta^{13}\text{C}$ -DOC between 0.2 and 0.7 μm filtrations: Denis et al. (2017) A comparative study on the pore-size and filter type effect on the molecular composition of soil and stream dissolved organic matter. *Organic Geochemistry* 110: 36–44 Bouillon et al. (2014) Contrasting biogeochemical characteristics of the Oubangui River and tributaries (Congo River basin). *Scientific Reports* 4 : 5402 | DOI: 10.1038/srep05402

-throughout the ms, you refer to either 'filtering' or 'filtration' – I would prefer to stick to the latter

-Figure 1: I do not see a legend to indicate which experiments the data correspond to.

Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2018-282>, 2018.

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