

Interactive comment on “Quantification of lignin oxidation products as vegetation biomarkers in speleothems and cave drip water” by Inken Heidke et al.

Anonymous Referee #2

Received and published: 21 July 2018

The manuscript from Heidke et al. proposes a sensitive method to quantify lignin markers in speleothems and cave drip water with application to real samples. The paper is of good quality and of interest for the readers of Biogeosciences. I have only minor comments.

I agree with reviewer #1 concerning the suggestion to add a QA/QC section and a diagram/scheme of the sample preparation protocol.

I suggest using consistent unit measures when reporting concentration values throughout the manuscript, especially concerning Table 2, Table 3 and section 3.3.1. I would also report LODs and LOQs in terms of concentrations rather than absolute amounts

C1

as it may be ambiguous if the absolute amount is referred to the total amount of samples or the total amount of analyte injected in the instrument.

I would suggest removing the first paragraph of the introduction or, alternatively, combined it with the last paragraph of the introduction.

At line 6 of page 5, the authors state that samples were stored for several months. Was the conservation of the samples tested somehow?

Section 2.2.7, please add the injection volume for analysis and the settings for MS/MS (e.g. collision method and energies).

I suggest renaming section 3.2.3 “repeatability” as, if I have understood correctly, it describes repetitions with the same equipment and the same operator.

Please add the total volume of the surrogate solutions to the caption of figure A2.

Typos: Page 3, line 32: H₂O Page 12, line 17: the symbol sigma should be capitalised

Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2018-253>, 2018.

C2