Biogeosciences Discuss.,
https://doi.org/10.5194/bg-2018-253-RC1, 2018

Biogeosciences Discussions
Open Access
EGU

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

Anonymous Referee #1

Received and published: 2 July 2018

After reading the manuscript I have the following remarks and suggestions. 1.Elements of scientific novelty should be presented in a more detailed and convincing manner (in the last paragraph of the Introduction). 2. I suggest that a diagram presenting the steps of the procedure used in the study be added to the EXPERIMENTAL section. It would help understand the details of the analytical protocol better, and allow the written description of the procedure to be shortened. 3. Innovative potential of the results obtained should be explained in detail (CONCLUSIONS) 4.Application of proper quality assurance/quality control (QA/QC) procedures is vital for the measurement results to be treated as a source of reliable analytical information. Consequently, I suggest that a separate section devoted to QA/QC be added to the manuscript. Spe-

Printer-friendly version

Discussion paper

cial attention should be paid to: - description of the validation procedure for the applied/proposed analytical protocol, - information on metrological characteristics of the analytical procedure, especially Method Quantitation Limit (MQL) values for the entire procedure (from handling of representative samples to statistical and chemometric evaluation of the data sets obtained), and not only for the analytical techniques used during the analysis of the extracts. 5. I suggest that the protocol described in Journal of Chromatography A (1217, 882-891, 2010) entitled “Estimating uncertainty in analytical procedures based on chromatographic techniques” can be used for evaluation and calculation of expanded uncertainty of results obtained when the procedure described in this manuscript is applied. 6. Green aspects of different approaches known from the literature should be discussed. There is a strong need of insertation of an additional chapter to the text of the paper. In this paper the newest literature information on the development of green analytical principles and approaches should be presented. Green analytical Chemistry (GAC) should be treated as a very important part of green chemistry. Authors should study the literature data this field in deeper manner.

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

Printer-friendly version

Discussion paper