

Interactive comment on "Comprehensive characterization of an Aspen (*Populus tremuloides*) leaf litter sample that maintained ice nucleation activity for 48 years" *by* Yalda Vasebi et al.

Anonymous Referee #2

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General comments: The authors have re-analyzed the ice nucleating particles (INPs) associated with a sample of leaf litter half a century after it had been analyzed for the first time. In the meantime, many studies on INPs have referred to the insights to which this sample had contributed. It is fortunate that the sample had been stored throughout a time of great progress in molecular biology, so the initial question about the origin of the associated INPs could be addressed again with much more powerful tools than were at hand initially. Scientifically sound, the manuscript is clearly written and a joy to read. There is little I can add in addition to what Cindy Morris has already suggested

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to improve it.

Specific comments

To what fraction of the main suspension do 0.22 um filtrate and 0.22 um retentate add up to? The difference could inform us about the fraction not washed off the filter.

Perhaps combine for a better direct comparison in a single Figure all normalized spectra of main suspension and 0.22 um filtrate of leaf litter, M. alpina strain LL118, and Pa. ananatis BAV 3057.

Consider replacing Figure 3 with a Table, where the data are sorted by descending relative contribution.

Increase the font of label legends and axes in all Figures

Page 7, line 24: delete "at"

Interactive comment on Biogeosciences Discuss., https://doi.org/10.5194/bg-2018-496, 2019.