

## Editor review

Thanks for your revisions. I agree with the reviewer that the manuscript needs English language corrections. I spent quite a bit of time going through your initial submission, correcting the English. However, much of the added wording after revisions contains grammatical issues. Please make corrections based on my specific comments below, in addition to the corrections suggested by the reviewer. What I've written below is how these sentences should read to be grammatically correct. Please make sure that these corrections accurately represent what you meant to communicate.

Page 1 line 17: Cryoconite is a mixture of impurities and ice visually represented by dark colors present in the ablation zone of glaciers.

Page 3 lines 20-24: In the laboratory, the cryoconite samples were freeze-dried into powder. In this work, concentrations and fractions are referred to as dry cryoconite mass. Cryoconite mainly forms in the ablation zone on glaciers in summer season. Therefore, our measurements mainly reflect processes occurring in summer on the glacier surface.

Page 3 line 26: In detail, the sample was first transferred into a PTFE high

Page 3 line 32: This procedure was repeated to remove HF completely. You also need subscripts on HNO<sub>3</sub> and H<sub>2</sub>O.

Page 3 line 33: to the vessel which was placed into the oven

Page 3 line 35: After treatment, each sample was measured by...

Page 5 line 25: at specific wavelengths

Page 5 line 27: mass absorption coefficient

Page 5 line 29: was calculated by dividing

Page 6 line 27: 7.3%

Page 7 line 35: terrestrial environments

Page 7 line 36: highest TOC content

Page 7 line 37: test this hypothesis

Page 9 line 19: (Remove beginning of this sentence). Four glaciers...

Page 9 line 20: similar patterns

Page 9 line 22: organic matter

Page 9 line 23: microbes in such environments may perturb the natural distribution

Page 9 line 29: the high mass concentration

Page 9 line 30: total absorption larger than BC.

Page 9 line 35: In future research,