

Interactive comment on “Technical Note: Comparison of storage strategies of sea surface microlayer samples” by K. Schneider-Zapp et al.

Anonymous Referee #1

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The technical note of Schneider-Zapp et al. evaluates different storage treatments of surface microlayer samples. As in any discipline that involves sampling the environment the appropriate sample storage conditions should be evaluated along with the measurement protocols. This is often not done, or not reported. Thus, from this perspective notes on potential pitfalls in storage sampling are welcome.

My major concern is that the manuscript does not provide anything new and due to the length also does not serve as review on SML methodology and sampling storage, which I would consider an important exercise. For example only the Garrett screen has been used, but quite some studies use glass plate samplers by Harvey and Burzell.

Perhaps not surprising, the main outcome of the current study is, that depending on the environment sampled, the parameter measured, the protocol being used an in-

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dividual evaluation of the sample storage conditions necessary. In this respect the current manuscript confirms some findings of the past. Thus, I would weave the current findings into a manuscript that describes and interprets the ‘unbiased’ SML data the authors certainly have.

The manuscript is fluent to read, however, explanations – particularly in the methods section are missing:

page 2837, line 7: what are the logistical reasons, I suggest to be more specific

page 2838: I miss a general description how the samples have been taken. How much sample has been collected per sampling, how long did the sampling take, what precautions have been taken to avoid contamination of the samples?

page 2838, line 5: The treatments are listed in Table 1. → This comes rather surprisingly and actually you mean the storage treatments.

page 2838, line 6: ...are in common use ... by whom?

page 2838, line 17: What peristaltic pump? What tubes? As mentioned above a proper description of the sample handling is warranted.

page 2838, line 26: All others, meaning treatment number 7 or the samples of treatment number 7?

page 2838, line 27 – page 2839, line 28: I suggest to reference to established protocols and then describe the method briefly as is done. That way the reader may better judge whether the methods were done properly and where modifications have been made.

page 2840, line 2: I would be interested in the comparison of glass versus plastic also visually. I did not quite understand what statistical tests have been done in the end, with what software and how. I think some clearer writing is necessary here. E.g. ... whether any of the factors were zero... What factors did the authors mean here (glass versus plastic, treatments...?)

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It was unclear to me whether the statistical treatment of triplicates was done on triplicates per sampling date or that the 3 sampling dates were considered triplicates.

Table 2: Instead of the many markers I suggest to introduce a 4th column for the citations.

Interactive comment on Biogeosciences Discuss., 10, 2835, 2013.