

Interactive comment on “Technical Note: On the determination of enclosed water volume in large flexible-wall mesocosms” by J. Czerny et al.

K. Spilling

kristian.spilling@environment.fi

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General comments

The paper presents a method how to calculate the exact volume in large mesocosm bags with flexible walls, which can vary considerably even between bags of exact same dimensions. Knowing the precise volume is important for any type of manipulation of the experiment, for example addition of nutrients, in order to know the final concentration. The topic presented in the paper is important for mesocosm experiments, and the technical solution is straight forward and well explained.

Studies of ocean processes in mesocosms have been developed over the past decades, and enables studies of more complexity compared with small-scale bottle

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experiments, e.g. effects of stratification. In particular for studies of future ocean scenarios, the mesocosm approach is an important tool, and I judge the paper to be timely and appropriate in that respect.

Specific comments

One thing that I would like to see discussed is the potential effects this treatment would have on the experiment itself.

Firstly, the complete mixing with air bubbles; what happens with the dissolved gasses? Also the break down of thermocline would increase the nutrient concentration in the upper parts of the water column. How rapidly does the thermocline establish again?

Secondly, the salt added. If I read table 1 correct you are increasing the salt concentration with 0.3-0.4 (this could also be stated in the text). Would that have any effect on the biology in the system at the start of the experiment?

Technical issues

The text is well written and easy to follow.

P 13021, L 14: I would put ‘anti-caking’ instead of ‘anti caking’

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