

On the barium-oxygen consumption relationship in the Mediterranean Sea: implications for mesopelagic marine snow remineralization
Authors: Jacquet et al.

• **Associate Editor Decision: Publish subject to minor revisions (review by editor)** (14 Feb 2021) by [Carolin Löscher](#)

Comments to the Author:

Dear authors

thanks for your re-submission and response. The reviewers repeatedly asked for describing the method for measuring PHP. I understand it is described elsewhere, still, please provide a short description, it is not beneficial for the reading flow to jump to another paper.

All the best

[Carolin Löscher](#)

Reply : Method for measuring PHP is now better explained.

"Prokaryotic heterotrophic production (PHP) estimation was measured over time course experiments at in situ temperature (13°C) following the protocol described in Tamburini et al. [2002]. 3H-leucine labelled tracer [Kirchman, 1993] was used. For water sample collected with Niskin bottle we have performed measurement in three replicate 20 mL and 40 mL seawater volume for the depth ranged 0 to 800 m-depth with 20nM at final concentration of Leucine. Concerning depth above 800 m-depth, PHP was measured in three replicate of 40 mL of seawater with 10nM at final concentration of Leucine. Samples were incubated 2, 6 and 10 hours respectively for sample ranged between 0-200 m, 200-600 m and up 800 m-depth. To calculate prokaryotic heterotrophic production, we used the empirical conversion factor of 1.55 ng C per pmol of incorporated leucine according to Simon and Azam [1989], assuming that isotope dilution was negligible under these saturating concentrations."