

Interactive comment on “Primary production and respiration of hypersaline microbial mats as a response for high and low CO₂ availability” by L. Bento et al.

Anonymous Referee #3

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The manuscript “Primary production and respiration of hypersaline microbial mats as a response to high and low CO₂ availability” by Bento et al. addresses the extremely relevant issue of carbon limitation in shallow water microbial biofilms. It presents some interesting data, but has methodological problems and in my opinion should not be accepted for publication in Biogeosciences.

The major problem I identify is replication. All figures show measurements of a single profile. Averages and standard deviations should be presented if, in fact, replicates were used. From reading Materials and Methods I get the feeling no replication was used.

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The microphytobenthic community is very poorly described. The authors refer only diatoms and filamentous cyanobacteria. What was the relative contribution of each group? What were the main genera/species present?

The authors refer this manuscript as the “first account of carbon limitation in a microbial mat”. Previous studies refer carbon limitation in microphytobenthic biofilms, for example Cook and Roy (2006) (this paper is in the reference list of the manuscript).

The English requires improvement.

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