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Interactive comment on “Trace elements in shells of common gastropods in the near vicinity of a natural CO₂ vent: no evidence of pH-dependent contamination” by J. B. McClintock et al.

Anonymous Referee #1

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This article presents trace elements content data in gastropod shells. The authors wanted to rely these concentrations with pH of the water and expected a relationship with pH due to the change of solubility of these elements with pH. Unfortunately, many elements contents were below the detection limits (1-2 ppm) and the ones that are above the DL show no variation with pH. I agree that it is difficult to discuss some results when there are no variations. But I think that this study has some major lacks and so I think that this manuscript cannot not be published in its present form. The discussion needs to be more developed. The authors could for example discuss the differences of trace contents between gastropod species.

1- The authors supposed that there are some accumulations of trace elements in water

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because of pH variations, but there are no data to support this. Perhaps the shell contents show no variation with pH because there is no change in the water. 2- The authors did not discuss the possibility that partition coefficient could be influenced by the water pH as it is the case for example for uranium. No comparison with inorganic calcium carbonate was made.

There is no table of results.

p 5217, l5: Doney et al (2009) could be added in the references p 5219: what are the errors for the means of pH? p 5220: please precise the standards used p 5220: please precise here the detection limits

Why Mg was not analysed?

Interactive comment on Biogeosciences Discuss., 11, 5215, 2014.

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