

Interactive comment on “Ash leachates from some recent eruptions of Mount Etna (Italy) and Popocatépetl (Mexico) volcanoes and their impact on amphibian living freshwater organisms” by M. D’Addabbo et al.

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Dear Editor of Biogeosciences, please find attached to this letter the revised version of the manuscript: Ash leachates from some recent eruptions of Mount Etna (Italy) and Popocatépetl (Mexico) volcanoes and their impact on amphibian living freshwater organisms, by D’Addabbo et al.

We wish to thank the careful revisions of F.A. Viehberg. We virtually accepted all the suggestions he provided. The changes are made visible in the revised version of the

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manuscript.

Reply to main points.

#1 We added the suggested references

2 We calculated the partition between ammonia and ammonium at measured pHs. The values were added in Tables 1 and 2. Further details about the calculation of the partition were added in the method section. The obtained data do not change the results showed in Figure 11, therefore the suggested dependence still holds. The text was changed accordingly with the obtained partition.

#3 We partially disagree with reviewer on this point. The buffering effect of lake water is stressed in different parts of the manuscript, and its dependence from compounds dissolved in the water clearly presented. To have a complete analysis of interaction of the different compounds with ash leachates probably would deserve another paper, and it is out of the scope of the present manuscript. However, we think the reviewer is right in asking some more information about dissolved carbonates, and we added calculations of carbonate ions in Ohrid lake water in Table 2. A discussion of the data was also inserted in paragraph 4.2.

#4 We have to recall that the argument of the manuscript is not the impact of ash on lake Ohrid, and the lake water is used only as an example of natural water. However, we added some discussion about the amount of ash needed for contaminating lake Ohrid above the European limits of drinkable water, which are the same of Italian drinkable limits. We changed the term Italian to European in the text.

Please also note the supplement to this comment:

<http://www.biogeosciences-discuss.net/12/C7473/2015/bgd-12-C7473-2015-supplement.pdf>

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