

Interactive comment on “Tracing atmospheric nitrate in groundwater using triple oxygen isotopes: evaluation based on bottled drinking water” by U. Tsunogai et al.

U. Tsunogai et al.

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Dear Dr. Alexander,

Thank you very much for your comments and suggestions on our manuscript. We would like to reply to you by citing each of your comment.

> My most significant suggestion is to include a cartoon of the biological processing that may be occurring in these watershed ecosystems, and refer to this figure in the text.

We would like to add a figure of the biological processing in the revised manuscript.

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We would like to refer to this figure in the text as well.

> In addition, the paper needs a “Conclusions/Summary” section to summarize what was done and the results.

We would like to add a “Conclusions/Summary” section in the revised manuscript.

> Page 16497 Line 14: Remove “in” between “acquaintances” and “abroad”.

We would like to revise this as suggested in the revised manuscript.

> Page 16497 Line22: change “were” to “are”.

We would like to revise this as suggested in the revised manuscript.

> Page 16501 Paragraph beginning on line 3: This seems insignificant when your precision is an order of magnitude greater than this.

We would like to remove this paragraph in the revised manuscript.

> Table 1: Label what “H” means.

The label “H” means heating treatments for the sterilization, while the explanation was omitted from the footnote in the submitted manuscript. We would like to add this in the revised manuscript.

> Table 2: Why do you report Cl concentrations? Are these used for anything in the analyses?

Because Cl was a major anion in each sample, we listed the concentration as a kind of yardstick for the readers of Biogeosciences who are not familiar with the samples. Besides, by showing the Cl concentrations, we would like to demonstrate that each bottled water sample represented each source groundwater so that the alternations during storage/transportation were minimum for each bottled water sample.

> Figure 2: State what the dashed oval represents in the figure caption.

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We would like to add this in the figure caption in the revised manuscript.

We would like to thank you for the helpful comments and suggestions. We trust that the answers are satisfactory responses to your comments and questions.

Sincerely, Urumu

Cc: Drs. A. Suzuki, S. Daita, T. Ohyama, D.D. Komatsu, and F. Nakagawa

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