

Point-by-Point-Reply to “Nitrite consumption and associated isotope changes during a river flood event”

Dear Helge Niemann,

thank you very much for the revision and the positive evaluation of our manuscript.

We have changed P3, L23; P4, L20; the tense in the results chapter; P7, L33 and the order of d18O:d15N as suggested.

On page 4 line 15, we report the analytical error of our isotope measurements, which are based on triplicate standard and duplicate sample analyses.

In the sentence on page 8 line 4, we refer to the situation in soils, not in the water column or in river sediments; we do assume that the role of filtering of ammonium by clay minerals in the water column is negligible in our study. The reasons are the following: (1) the suspended matter in the water column during the flood event is relatively low and has a high content of organic matter, and, consequently, does not contain a large amount of clay minerals. This is reflected in the sediment structure. Sediments at the weir are relatively sandy with only little clay content. (2) Even if these sediments were resuspended, any present clay minerals should be loaded with exchangeable ammonium beforehand. They might then actively exchange ammonium, but this will not have a net concentration effect.

To focus on the main storyline of the manuscript, we for now refrained from further discussion of the role of clay in the water column and rephrased the sentence to “because ammonium molecules are positively charged and thus tightly bound to clay particles in soil, and elution with discharge generally does not occur”.

Page 8 line 21 has been changed to “because nitrite is generally not abundant in the catchment and is immediately oxidized”.

Best wishes,

Juliane Jacob