

## Measurement of concentrations and isotope ratios of nitrite in acidic forest soils

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Nitrite in acidic forest soils has been ignored because nitrite concentration is quite low in most of the cases. However, Stevens and Laughlin (1997) clearly showed that the conventional method for the extraction of soil inorganic N such as the use of KCl and K<sub>2</sub>SO<sub>4</sub> solutions cannot work for nitrite determination due to the oxidation of nitrite to nitrate during the extraction. We reevaluate their method with alkali salty solution (pH=12) to prevent nitrite from being oxidized during the extraction with several Japanese temperate forest soils with low pH. We found that high nitrite concentration can be found occasionally, which affects the stable isotope measurement of nitrate if nitrite is not carefully removed from the samples. We will show our preliminary data on the concentrations and isotope ratios of nitrite and nitrate to discuss the importance of nitrite in forest ecosystems as an intermediate compounds in many nitrogen transformations such as nitrification, (a)biotic denitrification and nitrosation.