

Interactive comment on “Nutrients Dissolution Kinetics of Aerosols at Qianliyan Island, the Yellow Sea by a High Time-resolution Nutrient Dissolution Experiment, Potential Linkages with Inorganic Compositions and P solubility controlled factors” by Ke Zhang et al.

Zhang

smile_chole@sina.com

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Thank you for your suggestions and comments. First, this island site can ensure the continuity of the sampling in time scale as much as possible, which the cruises over the Yellow sea cannot. Though there were no replicates for sampling sites, the replicate measurement of sub-samples has been done. The relative standard deviation of concentration of nutrients for the replicates ($n=5$) were less than 2%. Second, so far,

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only the comparison between fiber filter and quartz filter on nutrient sampling and analysis (Pszenny et al., 1993) has been reported and there are no related reports about the comparison of the polycarbonate filters and cellulose fiber filters, it acquiesced that there is no difference between them on aerosol bulk sampling for nutrients analysis. None sole use of filter was an unavoidable pity because of the shortage of polycarbonate film in the market and recommendation of cellulose fiber film in national standard. Third, the overall RSD of replicates ($n=3$) of the dissolution experiment (Milli-Q water as leaching solution, 60min) were for 1.7%, 1.2%, 2.3% and 3.4% ammonium, nitrate phosphate and silicate, respectively. Hence, it was considered that there is no need to repeat.

Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2018-985>, 2018.

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Figure. The high-time resolution dissolution curves for replicates ($n=3$) using raw nutrient concentration data. The leaching solution was Milli-Q water (pH=5.5) and leaching time was 60 min.

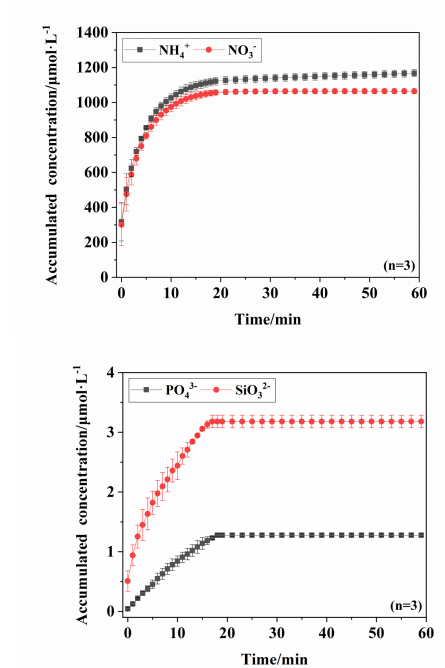


Fig. 1. The high-time resolution dissolution curves for replicates

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