

## ***Interactive comment on “Speciation and distribution of P associated with Fe and Al oxides in aggregate-sized fraction of an arable soil” by X. Jiang et al.***

**Anonymous Referee #2**

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This study revealed the distribution and speciation of P in a soil sample from a surface horizon of German agricultural field. The authors found that the P in the soil would be mainly retained by amorphous P (and Al) oxides, and the relative distribution and speciation of varying P forms would be independent of the size of soil aggregates. The authors also clarified the distribution of P unextractable with NaOH-EDTA solution. These results would be of interest for many soil scientists and would accelerate related research on P behavior in soils.

I want to point out that we readers should be careful for interpreting the data, because the methodology of P separation developed in this study has not been validated using standard samples or well-defined ones yet. For example, it has not been confirmed that

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the P adsorbed on ferrihydrite and goethite are correctly fractionated into PN and PN-I, respectively. It would be also possible that oxalate removes P from P-goethite complexes, which is unexpected in this study. Therefore, I would like to expect validating the methodology proposed in this study in near future.

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