

Interactive comment on “Linking dissolved organic matter composition to metal bioavailability in agricultural soils: effect of anionic surfactants” by M. C. Hernandez-Soriano and J. C. Jimenez-Lopez

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We appreciate the interest of Prof. Mostofa on this manuscript and his comments, and we are glad to provide a brief response to the questions provided.

Firstly, 'fluorescence components' is a well accepted term, please refer to Fellman et al, 2010: Fellman, J. B., Hood, E., and Spencer, R. G. M.: Fluorescence spectroscopy opens new windows into dissolved organic matter dynamics in freshwater ecosystems: a review, *Limnol. Oceanogr.*, 55, 2452–2462, 2010. This is a highly cited manuscript

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(114 cites, web of science) and their authors are well recognized as leading experts in the field. We have therefore refereed to this article and related work in this manuscript. Please understand that we find this cite more suitable and aligned with our work than the cite suggested by Prof. Mostofa.

A PARAFAC analysis seeks to identify the main components that can represent the variance in DOM fingerprints for a particular system studied. This was not the objective of our study. It is rather obvious that the fingerprint of a particular sample can be compared with components attributed to pool of compounds (humics, quinone-like, etc) by established models - please refer to Fellman et al 2010 and 2009 in the reference list, Zhou et al 2013, Miller et al, 2009: indeed, the 'reduced quinone-like component' is also well described in those cites. Therefore, there has been no 'misinterpretation' - it is a simple comparison of fingerprints for specific samples to components derived from general models.

Finally, the remark about the presence of 'organic ligands' in the DOM is a bit confusing. The molecules present in the DOM carry varied functional pools which indeed can act as ligands for metals. We could suggest a substantial number of articles on the topic, for instance: Characterizing the interactions between trace metals and dissolved organic matter using excitation– emission matrix and parallel factor analysis. Y Yamashita, R Jaffé - *Environmental Science Technology*, 2008 Complexation of trace metals by adsorbed natural organic matter JA Davis - *Geochimica et Cosmochimica Acta*, 1984

kindest regards,

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