

Interactive comment on “Characterization of soil organic matter by near infrared spectroscopy – determination of glomalin in different soils” by J. Zbiral et al.

Anonymous Referee #1

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Commonly, glomalin-extraction is associated with the co-extraction of humic acids. Although the latter are not well defined due to the fact that it is an operational classification rather than a chemical, they contain a considerable amount of carbohydrates and proteins. Up to now I have not seen convincing evidence that glomalin is not a part of the proteinaceous fraction of humic acids. Considering further that humic acids are thought to fulfill exactly the same advantages with respect to soil fertility, the question arises what exactly is the difference? In the present paper, too, the glomalin was extracted with sodium citrate solution and the protein content was determined with the Bradford method. It is still not clear to me, how the obtained proteins are distinguishable from common soil proteins or cell wall residues which accumulate during

C1

soil organic matter formation? Thus, in my opinion the authors have determined the amount of soil proteins which can't be also not clear to me which specific parameter of the NIRS method is used for the identification of GRSP. The author may have developed a good means for determining the content of proteinaceous material which is extractable with sodium citrate but there is no proof that this is really glomalin. Taking this in account, I cannot see the new aspect of this work and I cannot recommend this paper for publication.

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C2