



## ***Interactive comment on “Protein analysis in dissolved organic matter: what free proteins from soil leachate and surface water can tell us – a perspective” by W. Schulze***

**W. Schulze**

Received and published: 16 February 2005

Reply to Referee #2: Referee #2 had the following specific comments and questions: - "The author used extract method instead of concentration or filtration, so the extraction, soluble DOM may be different from DOM in waters in composition, structure and by definition." It is correct that DOM from surface water was obtained by different means than DOM from soil leachates. That already is stated in the methods. From the point of having a liquid DOM solution from either source (surface water or suction plates for soil leachates), both samples were treated the same way and went through the same routine of sample preparation (filtration, freeze drying, resuspension, gel-filtration, and tryptic digest). In the revised paper it will be stated more clearly in the methods, that the extracts from decomposing plant material may represent a different protein fraction than DOM samples, and they are discussed separately. In addition, for the Tura site

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in Siberia, a more thorough comparison of surface water DOM and soil leachate will be included, which leads to a new figure in which all the DOM samples from the same experimental site were compared with respect to the water dynamics of that site.

- "In the literature review, the author may have to mention that quite a lot of work had shown the existence of proteins of DOM in terrestrial environments." Some of the suggested papers will be added

- "It would be interesting that these data can be compared with huge current existing data of DOM using general chemical analyses." I agree that a comparison of protein patterns with other properties of DOM would be very useful and give additional information. However, I think such a dataset would be most beneficial if all parameters were collected from the same set of samples. In the present study I have used a large diversity of samples to get an impression of how protein patterns vary with soil type, season, and DOC content. These parameters will be summarized in a new table 1, and in the results I refer to this table.

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Interactive comment on Biogeosciences Discussions, 1, 825, 2004.

**BGD**

1, S527–S528, 2004

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