Hydrol. Earth Syst. Sci. Discuss.,
https://doi.org/10.5194/hess-2019-229-AC1, 2019

Hydrology and Earth System Sciences
Discussions

Interactive comment on "Controls of fluorescent tracer retention by soils and sediments" *by* Marcus Bork et al.

Marcus Bork et al.

marcus.bork@bodenkunde.uni-freiburg.de

Received and published: 16 September 2019

We wish to acknowledge the constructive and helpful comments of the reviewer. The comments identified important areas that still required improvement. Below, we described point by point how we addressed the comments (in italics) in the revised paper. In blue you will find the positions of the corresponding changes in the revised manuscript:

General comments

Comment 1: *Some minor language mistakes are present that should anyway be corrected.*

Response 1: We thank the referee for this comment. An experienced colleague and native speaker checked the language once again.

Specific comments:

2.3.2 Sorption isotherms of the tracers

Comment 2: *It is not clear the reason because you investigated the adsorption of tracers by batch tests and not by using column tests, considering the variation of humidity along the column. Please, support your approach.*

Response 2: We thank the referee for this suggestion. According to the first review, we supported our approach in the introduction (p.3, l.26-30). We explained that batch tests have the main advantage over column tests that the experimental conditions can be precisely controlled. Under these experimental conditions, adsorption properties can be investigated independent of transport processes like preferential flow and transport-related soil properties like porosity etc. In the revised manuscript we have now additionally supported our approach in the discussion (p.10,l.24-26).

Revision in the marked manuscript: p.3, l.26-30 (Introduction); p.10, l.24-26 (Results and discussion)

3. Results and discussion

Comment 3: *Please, improve comparison between experimental findings and literature data.*

Response 3: We thank the referee for repeating this important suggestion. We added additional comparisons between experimental findings and literature data to the revised manuscript.

Revision in the marked manuscript: p.10,l.19-22; table 1; p.10/p.11,l.31/l.1 (Results and discussion)

Please also note the supplement to this comment:
https://www.hydrol-earth-syst-sci-discuss.net/hess-2019-229/hess-2019-229-AC1-supplement.pdf

---

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., https://doi.org/10.5194/hess-2019-229, 2019.