

Interactive comment on “Use of column experiments to investigate the fate of organic micropollutants – a review” by Stefan Banzhaf and Klaus H. Hebig

Anonymous Referee #3

Received and published: 10 August 2016

GENERAL COMMENTS

The paper addresses a comprehensive review of laboratory column experiments, conducted on different organic compounds and under (very) different experimental setups. Although the technicalities on organic micropollutant transport are outside my field of expertise (hence I cannot tell whether the list cited papers is exhaustive), the paper is easy to follow and attempts a useful synthesis of the main literature results. I particularly appreciate the critical discussion and the conclusions on the validity of column experiments for field applications. The authors often raise the point that standardized column experiments would be beneficial to the scientific community, so I think they could be a bit more explicit about operative steps forward to improve the transferability

C1

of results. In the paper, this is done only briefly in the conclusions, and I am wondering whether it would be worth creating a dedicated section, where proposing more solutions to the community.

MINOR POINTS:

I have the impression the abstract may be rather long. Maybe less general details on column experiments (which are of course well developed in the paper) would make it more efficient as an abstract.

Sec 3.1.3 It may be worth pointing out here that if a column experiment is run under non-stationary conditions (which would be typical in field conditions), then the concentration breakthrough curve does not represent the distribution of transit times of the compound, and the mass breakthrough curve should be used instead.

page 15, line 7: "(which represent the flow velocity of the fluid)", I would reformulate into "(which allow inferring the flow velocity of the fluid)"

TECHNICAL CORRECTIONS:

page 2, line 15: "into a problem contaminant"

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., doi:10.5194/hess-2016-196, 2016.

C2