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Hydrology and Earth System Sciences
Discussions

Interactive comment on "Analytical model for coupled multispecies advective dispersive transport subject to rate-limited sorption" *by* Jui-Sheng Chen et al.

Anonymous Referee #3

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The manuscript is well organized and scientifically structured. However, the followings should be addressed: 1. Proposed solution Eq.(24) C(X,s) of analytical model Eq.(1) is not the solution C(x,t) of the model. Provide the details of the analytical solutions. However, it is plotted in C(x,t) for t=1 only why? 2. The seepage velocity and dispersion coefficient is too high. Justify it. 3. The proposed analytical model with the simple initial and boundary conditions are chosen like zero and constant value has not significant impact in the present scenario.This may be addressed with more general cases and therefore, it is not a novel analytical solution. 4. Damköler number and Peclet number with concentration profile should also be presented. 5. Bulk dry density of the solid grain, [kg L-1] however in line177, it is different [ML-3]. 6.Distribution coefficient, Ki [L

kg-1]however in line178, it is different[M-1L3].

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