



PERGAMON

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## AUTHORS' REPLY

Response to Comment on "The sorption of lead(II) ions on peat" by  
Y. S. Ho and G. McKay, *Wat. Res.* **33**(2), 578–584 (1999)

The large number and array of different chemical species in peat imply that there are many peat-metal interactions; it is probable that any kinetic/mass transport representation is likely to be global. Several structural studies have identified various metal-peat bonds.

Therefore the search for a "best fit" model is not an unreasonable approach to this problem, certainly from a system design viewpoint, with as much mechanistic support as possible (as proposed by Van Noort).

We did not analyse the experimental data using Eq. (3) as the agitation data suggested that there was some boundary layer resistance and we went on to analyse our data using the modified parameter,  $t_0$ . Nevertheless, the application of Eq. (3), as proposed by Van Noort does look to be worthwhile based on the first set of data shown in Fig. 1 in his comments.

The  $q_e$  values that we are using as the basis for comparison are not constant, except at the Langmuir saturation capacity values, they represent the equilibrium values at the point of intersection of the system operating lines with the equilibrium isotherm.

The Langmuir combination concept is another model option, it provides more fitting parameters so the fit should be better. However, in terms of the comments I made in my first paragraph it should certainly be more suited to the array of peat-metal ion interactions.

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