

**Poster Number**

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<b>Topic</b>	Effect assessment
<b>Title</b>	<b>The Biodynamic Model: A Means to Improve Sediment Bioaccumulation Protocols and A Potentially Regulatory Tool?</b>
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**Keywords:** Bioaccumulation, biodynamic model

**Summary:** Here we propose and discuss the biodynamic model as a regulatory tool and as a means to develop an alternative standardized test protocol to determine bioaccumulation kinetics from both water and sediment/diet. One of the strengths of the biodynamic model is that it takes into account all uptake routes and allows capturing the biologically driven processes that govern bioaccumulation among species both for metals and organic compounds. In addition, relatively simple short-term experiments allow determination of the required unidirectional fluxes: influx from water and diet as well as efflux (loss and growth). Each biodynamic parameter is measured without interference from simultaneous processes and is used to determine accumulated whole body concentrations (i.e., balance between these opposing fluxes). An important capacity of the model, in a regulatory context, is the potential to include site-specific concentrations, geochemical conditions and species-specific comparable rate constants to predict contaminant bioaccumulation.