**Assessment of surface water monitoring data: application of biotic ligand model-based software applications to address the bioavailability of metals**

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It is since long known that the toxicity of metals in waters is modulated by parameters like pH or hardness. To describe the influence of such water quality parameters on the bioavailability of metals and to allow site-specific assessments biotic ligand models (BLM) were developed. BLM are now scientifically recognized tools for assessing the bioavailability of metals and were, e.g., applied in the European risk assessment of metals like copper (Cu) and zinc (Zn). However, since the original complex BLMs require more than 10 water parameters for an assessment they are not applicable in routine water monitoring. Due to cost restrictions only the most important parameters can be monitored. Therefore, user-friendly applications of the original BLM were developed (BLM-based tools) which only need up to three parameters, i.e. water hardness as Ca concentration, dissolved organic carbon (DOC) concentration, and the pH for assessing the site-specific bioavailable fraction of metals. The tools also allow the handling of data for larger number of sites. For site-specific assessments the calculated local quality standard (QS; protection goal: pelagic freshwater community) are compared to the dissolved metal concentration (operationalized as concentration after 0.45 µm membrane filtration) measured at the respective site. Freely available BLM-based software applications are for example Bio-met (www.bio-met.net) and PNEC.pro (www.pnec-pro.com). Both allow the evaluation of the metals Cu, Ni and Zn. In this contribution the use of such BLM-based tools in the evaluation of monitoring data for metals in the context of the European Water Framework Directive will be discussed and the performance of the tools evaluated. The dependencies of the site-specific QS calculated with BLM-based tools on the parameters hardness, DOC concentration and pH will be described and the results of the evaluation of a representative monitoring data set compared. Based on the results of this study recommendations regarding the future use of BLM-based software applications for accounting the bioavailability of metals in the routine evaluation of water quality will be derived.