

Bioaccumulation assessment: new methods need new testing and assessment strategies - proposal of an ITS

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Bioaccumulation assessment, usually mainly relying on the OECD test guideline 305 (the fish flow-through test) is part of the hazard and risk assessment in the context of registration and authorisation of industrial chemicals, pesticides, biocides etc. A number of alternative testing methods have been and are being developed, such as the in-vitro test guidelines for the determination of in vitro intrinsic clearance using cryopreserved rainbow trout hepatocytes and rainbow trout liver S9 sub-cellular fraction (OECD TG 319 A and B) and the new BCF test using *Hyalella azteca*. Both, standardised and nonstandardised tests will need to be integrated into a coherent testing and assessment strategy including also other available tests such as OECD TG 315 and 317 covering bioaccumulation testing in terrestrial and benthic oligochaetes. Aspects which need to be considered are specific regulatory requirements, e.g. in cosmetics assessment, tests with vertebrates cannot be used. Also, substance specific testing conditions need to be addressed, as required for compounds such as surfactants, superhydrophobic or ionisable chemicals. The practical requirements for bioaccumulation testing of nanomaterials are still not clearly defined and adjustments of the established test systems are mandatory. The poster will discuss a possible integrated testing strategy (ITS), considering the different applicability domains of the tests and regulatory needs.