



Update on CEFIC ECO14 (Development and validation of an abbreviated *in vivo* fish bioconcentration test) and ECO15 (Rapid estimation of TMF using laboratory, field, and computer modelling methods in aquatic organisms) Projects

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ECO14 (Development and validation of an abbreviated *in vivo* fish bioconcentration test):

- Aims of the project were to develop a "BETTER BCF" protocol using OECD 305 as a reference point
- Innovative techniques were developed including passive dosing of the exposure water, passive sampling in living fish, and the use of internal benchmarking chemicals to improve precision and information content
- An abbreviated 2-week BCF protocol using internal benchmarking gave excellent agreement with OECD 305
- Project is now completed and results are being reported in four peer-reviewed scientific articles

ECO15 (Rapid estimation of TMF using laboratory, field, and computer modelling methods in aquatic organisms):

- "Tiered Methods for Fish TMF" is in progress currently and includes research on in-silico, in-vitro, in-vivo and field methods to determine trophic magnification factors (TMFs) of chemicals
- In-vivo work in the project includes 1) Development of a novel method based on internal benchmarking for determining absorption efficiency of chemicals by fish from food and 2) Development of a protocol for determining process-specific elimination rate constants for fish using benchmarking
- The benchmarking test for absorption efficiency has been developed and applied to 16 substances.
- Experiments for determining process-specific elimination rate constants are underway.