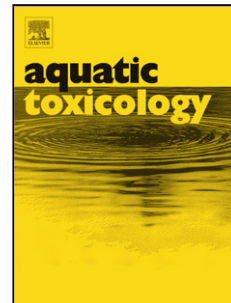


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Exploring uptake and biodistribution of polystyrene (nano)particles in zebrafish embryos at different developmental stages

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Highlights

- Only uptake (across epidermis) observed for particles smaller than 50 nm
- Small particles were detected to have biodistribution and even ended up in the eye
- Uptake of particles via chorion and epidermis is marginal
- Uptake should be monitored to provide more in depth toxicity information

Abstract

In ecotoxicology, it is continuously questioned whether (nano)particle exposure results in particle uptake and subsequent biodistribution or if particles adsorb to the epithelial layer only. To contribute to answering this question, we investigated different uptake routes in zebrafish embryos and how they affect particle uptake into organs and within whole organisms. This is addressed by exposing three different life stages of the zebrafish embryo in order to cover the following exposure routes: via chorion

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