

Recent Advances on Mercury Speciation in Aquatic Ecosystems, Health Effects and Analytical Techniques. (2017).

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ABSTRACT

Elemental mercury is not as poisonous as its congeners such as methyl mercury and dimethyl mercury, especially at trace levels. However, understanding the speciation mechanisms of mercury in aquatic ecosystems offers an opportunity to appreciate the dangers emanating from elemental mercury in the environment. Notably, elemental mercury is occasionally used in dental filling therapy which presents it as a non-poisonous element. Recent advances on mechanisms of elemental mercury speciation, health effects of different mercury congeners and analytical techniques of identifying/quantifying them in aquatic ecosystems are outlined. The effects of anthropogenic activities employing the use of elemental mercury such as gold amalgamation are highlighted through a case study. Kenya Gold mines are identified as a potential risk zone amenable to mercury health effects.

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