

## **Effects of copper, cadmium, zinc and their mixtures on the survival and behaviour of *C. elegans*.**

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In the past decades, the number of anthropogenic sources of heavy metals increased, which can cause serious health hazards for diverse animals including humans, hereby remaining a persistent (eco)toxicological concern. While toxic effects of individual metals have already been extensively characterized, very little is known about their interactions and putative additive effects, which occur in the environment. Especially soils, sediments and surface waters can be contaminated with mixtures of metals. The effects of metals in mixtures can be additive, antagonistic or synergistic.

One of the major challenges in ecotoxicology is thus to obtain insights in mixture toxicology to set realistic environmental quality criteria. We therefore aim to investigate whether and how metal toxicities modulate the survival rate and how this is translated to the behavioural level by looking at the locomotion and chemosensory capacities. To do so, we fully exploit the benefits of the free-living soil nematode *Caenorhabditis elegans* as a unique model to investigate the effects of exposure to copper, cadmium and zinc (as single metal and in combination) for different concentrations.

*keywords: mixtures, metals, nematodes, behaviour, survival*

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