



# ACUTE TOXICITY OF MANGANESE TO *Ceriodaphnia silvestrii* AND *Daphnia magna* in BIOASSAYS AND THE POTENTIAL TOXICITY OF THIS METAL IN THE URANIUM MINE EFFLUENT

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## *Introduction and Objectives*

- ❑ In the currently study treated effluents coming from the uranium (Ore Treatment Unit, Caldas, Brazil) with AMD are continuously discharged into the Ribeirão das Antas catchment basin.
- ❑ The main problems of these effluents released are the metal mixtures (U, Zn, F<sup>-</sup> and Mn), with high Mn values recorded in water and sediments samples, often above current Brazilian Legislation.
- ❑ In this context, we performed acute Mn toxicity tests using bioindicators species to assess the potential toxicity this metal present in the uranium mine effluents.
- ❑ According to the current Brazilian Legislation effluents should not present toxicity to aquatic organisms.



## Main Remarks

- ❑ According to acute Mn toxicity results this metal was considered toxic to freshwater indigenous zooplankton *C. silvestrii* with average LC<sub>50</sub> value of 5.9 mg Mn L<sup>-1</sup>.
- ❑ Currently we are carrying on ecotoxicological monitoring at the Ribeirão das Antas catchment basin to assess the potential toxicity of the chemical mixture that compose the radioactive effluents

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