

## Ecotoxicological monitoring around a hazardous waste incineration plant situated in a polycontaminated area in North-West Spain, using rodent as sentinels species, and biomarkers

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Ecotoxicological assessment was carried out around a focal source of pollution, a hazardous-waste incineration plant (HWI) situated in a polycontaminated area in North-West Spain, using mice (*Apodemus sylvaticus* and *Mus spretus*) as sentinel species, and biomarkers of exposure and effect.

Feral mice (*Apodemus sylvaticus* n = 46 and *M. spretus* n = 87) were caught by means of Shermann traps in the field in different potential polluted zones (I0, I1, I2 and I3) around a HWI and a control zone (localized 10 km from HWI) devoid of any known source of contamination and with the same climatic and ecological characteristics than the exposed ones. Haematological (WBC, LYM, MID, GRA, RBC, HGB, HCT, MCV, MCH and MCHC), genotoxicological (Comet test) and morphological parameters were evaluated as general biomarkers of toxicity.

Specimens exposed in potentially polluted areas presented some significant alterations in all the studied parameters when compared with animal from control zone. The general trend was that zone I1, placed up-wind and up-stream from the HWI, showed values quite similar to controls, while zones I0 and, especially, I3 (situated down-wind and down-stream and close to the HWI) presented significant alterations. Zone I2, near the urban and traffic-affected village of Constantí, showed some qualitatively different effects.