Ecotoxicological assessment of the effect of some new organic-mineral fertilizers on Eisenia Foetida earthworms

Mădălina IORDACHE, Ioan GAICA, Iacob BORZA, Daniel DICU - USAMVB Timisoara

Ecotoxicity tests provide a direct measure of the bioavailability of toxicants and help to establish linkages between site contamination and adverse ecological effects. There are more current laboratory test methods outlined, but it is very important the major advantages/disadvantages of each of them. The present paper uses as research methodology the OECD Guideline for testing of chemicals no. 207 which meets the most criteria expected for ecotoxicological testing. Earthworms Eisenia foetida (Savigny, 1826) had been exposed for 14 days to a geometrical series range of concentrations of the test substances (organic-mineral fertilizers L-200-Hum and SH-120). The performed study showed that the fertilizer L-200-Hum determined lower earthworm mortality comparing to SH-120 for all tested concentration levels and the fertilizer L-200-Hum positively influenced the earthworm rate of biomass accumulation. DL 50 it was established to be the concentration 4 g for the SH-120 fertilizer at the end of the test (14 days).