

ABSTRACT:

The goal of the bachelor thesis was the determination of toxicity of fluorotelomer alcohols. The toxicity was measured as ET_{50} by the oligochaete *Tubifex tubifex*. This test belongs to group of alternative methods which are faster and cheaper but they provide reliable data as well as the presently used classical methods. ET_{50} is the exposure time when 50 % of *Tubifex tubifex* individuals stop moving. EC_{50} of magnese chloride dihydrate was measured for the control of its correctness of determination and its acute toxicity indice is equal to $\log (EC_{50}) = -0,845 \pm 0,033$ [\log (mmol/l)]. EC_{50} is the concentration of the tested substance when 50 % of *Tubifex tubifex* individuals stop moving. 1H,1H,2H,2H-perfluorooctan-1-ol and 1H,1H,2H,2H-perfluorodecan-1-ol were the tested substances. Distilled water and solution of dimethyl sulfoxide in water (5 %) were used to prepare the saturated solutions of the tested substances. The concentrations of the saturated solutions were determined on GC-MS by absolute calibration method. The value of $\log (EC_{50})$ for dimethyl sulfoxide solution was measured to determine how it influences *Tubifex tubifex* during exposure time of 2,5 hours.

KEY WORDS:

fluorotelomer alcohols, alternative method, *Tubifex tubifex*