

Telomer Research Program



Report Title: 1-Decanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-Acute Immobilisation Test (48h) to *Daphnia magna* STRAUS Limit Test with the Saturated Solution

Author(s): Martina Noack

Contractor: Dr. U. Noack-Laboratorium für Angewandte Biologie (Sarstedt, Germany)

Study Completion Date: 07-August-2002

Study Objective: Determination of the acute toxicity of a saturated solution of 1-Decanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-, to *Daphnia magna* in a limit test conducted according to OECD Guideline No. 202.

Materials and Methods: Test beakers were pre-coated for 14 days as follows. 1-Decanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-, with a nominal loading of 200 mg/L was shaken for 96 hours at 20 °C. After phase separation, 20 mL per test replicate was transferred from the clear liquid phase to each glass beaker and covered with glass tops. After 14 days of pre-coating, the beakers were emptied and used for the test. The saturated limit test solution was prepared as above. After shaking, the suspension was centrifuged and the clear supernatant was transferred to each replicate. Four replicates, each of twenty, 2-24 h old daphnids, were placed in an incubator (light/dark cycle 16/8 for 48 h at 20 ± 1°C). Dilution water (Elendt M4 medium) without the test substance was tested as control. Potassium dichromate was used as a reference toxicant.

Findings: The limit test concentration and control were analyzed for the test substance by gas chromatography with mass spectrometric detection. The percentage immobility was determined in the limit test concentration and the control after 24 h and 48 h. The mean measured saturation limit test concentration was 0.16 mg/L. The percent immobilization after 24 and 48 hours of exposure are given in Table 1. There was no biologically significant effect (≤10%) in the limit test concentration or in the control group. The EC₅₀ value for the reference toxicant after 24 h was within the prescribed concentration range of 1.0-2.5 mg/L.

Table 1: Percentage number of daphnids incapable of swimming after 24 h and 48 h of exposure.

Saturated Solution concentration [mg/L]	IMMOBILISATION [%]									
	24 h					48 h				
	replicates					replicates				
	1	2	3	3	M	1	2	3	4	M
0.16	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0

M = mean value

Conclusion: There was no biologically significant effect ($\leq 10\%$) of the test substance on *Daphnia magna* at the saturated solution limit test concentration or in the control group. The EC50 was greater than 0.16 mg/L based on mean measured test substance concentrations.