

Rapport d'essai :	
Test verslag :	NO40754.01.01
Test report :	

## DAPHNIA TOXICITY

### Determination of Daphnia Magna mobility inhibition following OECD 202

#### Principle :

Determination, in the conditions defined in this norm, of the initial concentration (it means the concentration at the beginning of the test) that, in 24 and 48 hours, immobilises 50 % of the Daphnia's put in experimentation.

This concentration called *effective* initial inhibitive concentration is designed by EC<sub>50</sub>-24/48 h.

#### Method :

Directive of the :

- OECD 202 (04/04/84) "Guideline for testing chemicals: *Daphnia* Sp., Acute immobilisation test and Reproduction test";
- ISO 6341: "Determination of the inhibition of the mobility of *Daphnia magna* Straus-acute toxicity test.

#### Information on the tested organism :

*Daphnia magna* Straus aged more than 6 hours and less than 24 hours at the beginning of the test.  
Source : U.G. Gent University – laboratory Prof. Persoone. In cultivation in our laboratory.  
Alimentation : cultivation of *Selenastrum capricornutum* algae.

#### Number of organisms for the test :

20 organisms by test concentration (4 parts of 5).

#### Test concentration :

The test solution has to be prepared immediately before the introduction of Daphnia's. In the same time that the blanc, you have to put 100 % immobilisation after 48 hours and some intermediate immobilisation to calculate the EC<sub>50</sub>-48 hours.

In the case of a toxicity concentration higher than 100 mg/l, the result is not refined.

#### Test environment :

The prepared test environment has a pH 7.6 (± 0.2), a hardness 250 mg/l (in CaCO<sub>3</sub>) and is conform to OECD-202 (04/04/84).

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Other experimental conditions :

Total darkness.

The temperature of the test is  $21^{\circ}\text{C} \pm 1^{\circ}\text{C}$ .

No ventilation and no food during the test.

Sample preparation :

The mother solution preparation is carried out at a concentration of 100 mg/l.

The mother solution is diluted in order to obtain a concentration range that permit to calculate the  $\text{EC}_{50-48}$  hours; the exact concentrations are mentioned in the table below.

Results

Concentrations mg/l	Immobile Daphnia's after 48 hours		% immobility
	A	B	
Blanc	0/10	0/10	0
136	0/10	0/10	0
68	0/10	0/10	0
14	0/10	0/10	0
6,8	0/10	0/10	0
1,4	0/10	0/10	0
0,7	0/10	0/10	0

Calculation method : Probit method

**After a 48 hours incubation, the immobilisation of 50% Daphnia's magna appears for a > 136 mg/l concentration.**

**$\text{EC}_{50}$  48h Daphnia magna > 136 mg/l.**