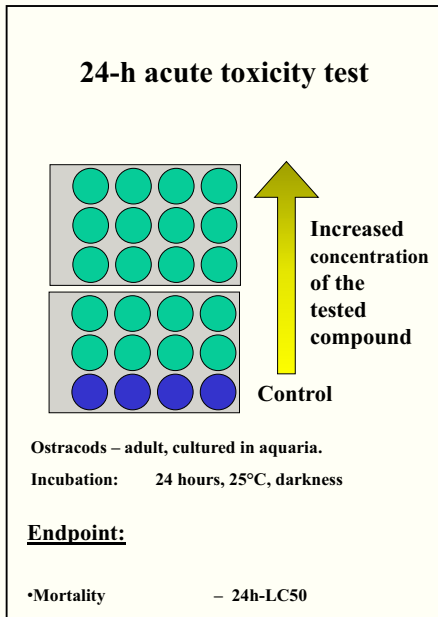




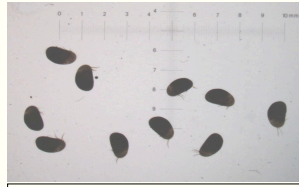
EFFECTS OF THE PARASITICIDES AVERMECTINS ON THE OSTRACOD *Heterocypris incongruens*

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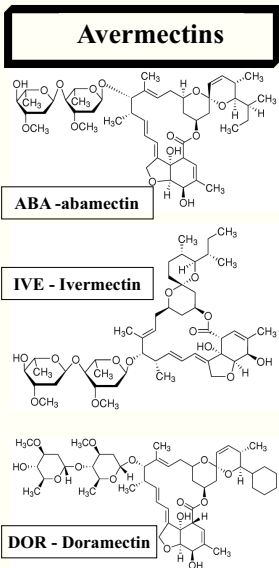
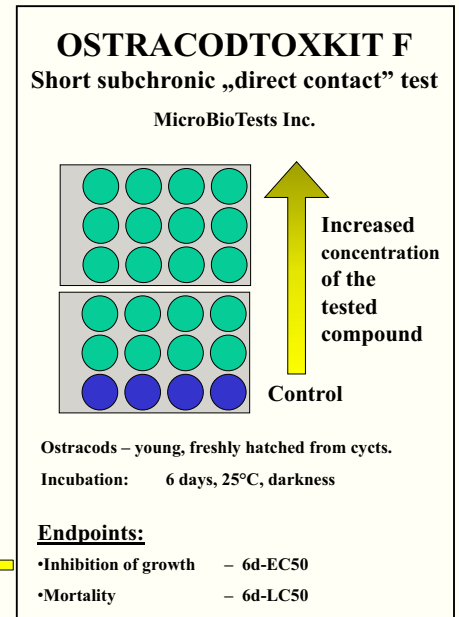
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Heterocypris incongruens
(Ramdohr, 1808)
Family: *Cypridoidea*
Order: *Podocopida*
Class: *Ostracoda*
Phylum: *Arthropoda*



Length measurement with the Image Tool
(photo: Nikon SMZ 1500)



INTRODUCTION

- Avermectins are the natural fermentation products of the soil actinomycete *Streptomyces avermectinus*.
- They are used in veterinary medicine as anthelmintics against internal and external parasites of cattle, pigs, horses, sheep and goats.
- The primary target of avermectins is the nervous system of parasites. They interact with chloride channels (glutamate-gated and GABA-gated), which results in disrupting neural signal transmission.
- Avermectins are highly lipophilic, poorly soluble in water and readily adsorbed by organic matter, soil and sediment particles.

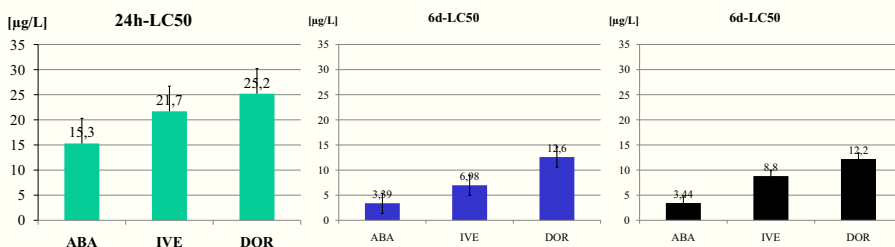
GOAL

Evaluation of the toxicity of 3 avermectins to *Heterocypris incongruens*.

EXPERIMENTAL

Test	1	2	3
Type	Acute	Subchronic	
Duration	24 h	6 d	
Ostracods	adult	freshly hatched	
Food		algae	
Sediment			

RESULTS



Acute toxicity
food (-) sediment (-)

Subchronic toxicity
food (+) sediment (-)

Subchronic toxicity
food (+) sediment (+)

CONCLUSIONS

- Avermectins were very toxic to the ostracod *Heterocypris incongruens*. Abamectin was the most toxic with 24h-LC50 = 15.3 µg/L and 6d-LC50 = 3.4 µg/L.
- Avermectins did not affect the growth of the living ostracods.
- The presence of the sediment in the sample did not influence on the toxicity of the tested compounds.