

OSTRACODTOXKIT FTM

MICROBIOTESTS

FOR SEDIMENT TOXICITY TESTING

With the
benthic crustacean
Heterocypris
incongruens



**Cost-effective,
culture/maintenance free*
bioassays**

* *Test organisms are included in the kits as “dormant eggs (cysts)” which can be hatched “on demand”*

THE VERY FIRST
“*SEDIMENT-CONTACT*”
MICROBIOTEST !



Each Toxkit contains
all the materials for
performance of 3 up to 8
complete bioassays

OSTRACODTOXKIT F

6 days “direct contact” Microbiotest

For Toxicity Screening of contaminated river sediments.

Also applicable to contaminated soils and solid wastes

Each OSTRACODTOXKIT F contains all the materials to perform 3 up to 8 (*) chronic toxicity tests with the freshwater ostracod crustacean *Heterocypris incongruens*. Easy to follow instructions and detailed illustrations are provided in the kits for the conduct of the bioassays. The test organisms are included in the kits as “dormant eggs (cysts)” which can be easily hatched on demand in less than 3 days, to supply the live biota for the conduct of the assays.

(*) depending on the number of parallels (6 or 4) and the concurrent or separate performance of the assays

Test criterion

- The OSTRACODTOXKIT F microbiotest is a 6 days chronic assay based on two distinct effect criteria : mortality of the test organisms or growth inhibition, resulting from the direct contact with (non-diluted) sediment.

Reproducibility

- Cysts of high quality produced in strictly controlled conditions prelude variability associated with recruitment/maintenance of live stocks in laboratory cultures.
- Standardized microplate test containers constructed of biologically inert materials ensure uniform exposure conditions.
- High uniformity of the volume of sediment in each test cup is guaranteed through a unique sediment dispensing system.
- Highly uniform quality of the water layer on top of the sediment in the test cups (water/sediment ration 8 : 1) is achieved with the standard EPA freshwater prepared by simple dilution of concentrated solutions of selected salts with deionized water.
- A quality control of the test organisms for survival and growth is obtained by parallel testing in a reference sediment included in each Toxkit.
- The addition of a fixed amount of a standard food (live algae) to the test cups precludes variability of results due to food shortage resulting from different amounts of (live or dead) organic material in the test sediments.

Assets and cost-effectiveness

- Cysts can be hatched on demand, eliminating the need and the costs of continuous culturing and maintenance of test organisms.
- Minimal equipment is needed for the test performance : dissecting microscope - small

incubator - small centrifuge - conventional laboratory glassware.

- Shelf-life of cysts guaranteed for several months when stored properly, reducing test scheduling constraints.
- Live (algal) food for the test-organisms easily obtained from “algal beads” included in the Toxkit.
- Length measurement of the ostracods easily performed with unique micrometer slips included in each Toxkit.

Contents

- Tubes with cysts, concentrated hatching and test medium, hatching and test containers, reference sediment, glass micropipettes for the transfer of the organisms, algal food, micrometer slips, large mouth syringes, plastic micropipettes and microsieve for the sediment transfers.
- Detailed Standard Operational Procedure brochure, abbreviated Bench Protocol and data scoring sheets.
- Specification sheet with the batch number of the cysts, the media, the food and the reference sediment.

User-Friendliness

- Simple handlings and scorings.
- Total performance time of the assay less than 2 hours.

Sensitivity

- The sensitivity of the Ostracodtoxkit microbiotest compares favorably with that of “conventional” sediment contact tests with e.g. the amphipod *Hyalella azteca* or the midge larvae *Chironomus riparius*.

Validation

- The Ostracodtoxkit has already been successfully applied on a large number of contaminated sediments from different rivers in different countries, in parallel with pore water assays or conventional sediment contact tests.

A list of selected references is available upon request.

N.B. All the materials included in the OSTRACODTOXKIT are also available separately.