

ROTOXKIT M

MICROBIOTESTS

With the marine
rotifer
Brachionus
plicatilis



Cost-effective,
culture/maintenance free*
bioassays

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



Each Toxkit contains
all the materials for
performance of 6
complete bioassays

ROTOXKIT M

24-48h Microbiotest for Toxicity Screening of

Pure Compounds - Contaminated Seawater and
estuarine/marine Sediments - Effluents/Wastes released in
Estuaries or coastal Waters

The ROTOXKIT M contains all the materials necessary to perform six acute toxicity tests with the marine rotifer* *Brachionus plicatilis*.

* Rotifers are ecologically important members of freshwater and marine aquatic communities and have very rapid turnover rates.

Easy to follow instructions and detailed illustrations are provided in the kits for the conduct of range-finding and definitive tests.. The test organisms are included in the kits as "dormant eggs (cysts)" which can easily be hatched on demand, in less than 24h, to supply the live biota for the conduct of the assays.

Test criterion

- The ROTOXKIT M is a 24-48h assay based on mortality of the test organisms, with calculation of the 24hLC50.

Reproducibility

- Cysts of high quality produced in strictly controlled conditions preclude variability associated with recruitment/ maintenance of live stocks in conventional bioassays.
- Highly uniform quality of the test medium is achieved by simple dilution of concentrated solutions of selected salts with deionized water.
- Standardized microplate test containers constructed of biologically inert materials ensure uniform exposure conditions.
- A Quality Control Test with a reference chemical is described in detail, for accuracy and reproducibility check.

Cost-Effectiveness

- Cysts can be hatched on demand, eliminating the need and the costs of continuous culturing and maintenance of test organisms.
- Minimal equipment needed for test performance: dissecting microscope - small incubator - conventional laboratory glass-ware.
- Shelf-life of cysts guaranteed for several months when stored properly, reducing test scheduling constraints.

Contents

- Tubes with cysts, concentrated hatching and toxicant dilution medium, hatching/test containers and micropipettes for the transfer of the organisms.
- Detailed Standard Operational Procedure brochure, abbreviated Bench Protocol, data scoring sheets and graphical LC50 calculation sheets.
- Specification sheet with batch number of the cysts and the media.

User-Friendliness

- Specially designed « all in one » microplates with hatching trough, rinsing troughs and test wells for easy and rapid transfer of the test organisms under a dissecting microscope.
- Simple handlings and scorings
- Total performance time approximately 1 hour.
- A floppy disc for easy Toxkit data treatment can be obtained on demand.

Sensitivity

- Very chemical dependent, but quite sensitive to particular chemicals and mixtures.
- Sensitivity can be increased substantially by extending the exposure time from 24h to 48h.

Applications

- *Brachionus plicatilis* is a euryhaline species which allows to perform bioassays on waters in a salinity range from 5 ppt (brackish water) to 35 ppt (seawater).

Validation

- The Rotoxkit M is used in many laboratories worldwide for routine screening of chemicals and environmental samples.
- **The Rotoxkit M strictly adheres to ISO standard 19820.**
- A substantial number of publications, reports and posters can be found in the section "Publications" on the website www.microbiotests.be.

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