
**Water quality — Determination of acute
lethal toxicity to marine copepods
(*Copepoda*, *Crustacea*)**

*Qualité de l'eau — Détermination de la toxicité létale aiguë vis-à-vis de
copépodes marins (Copepoda, Crustacea)*



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International Organization for Standardization
Case postale 56 • CH-1211 Genève 20 • Switzerland
Internet iso@iso.ch

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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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Annexes A, B and C of this International Standard are for information only.

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Water quality — Determination of acute lethal toxicity to marine copepods (*Copepoda*, *Crustacea*)

1 Scope

This International Standard describes a method for the determination of the acute toxicity to one of three specified species of marine copepod (*Copepoda*, *Crustacea*) of

- a) chemical substances which are soluble, or can be maintained as a stable suspension or dispersion, under the conditions of the test;
- b) industrial or sewage effluents, treated or untreated, after decantation, filtration or centrifugation if necessary;
- c) marine or estuarine waters.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 5667-2, *Water Quality — Sampling — Part 2: Guidance on sampling techniques*.

ISO 5667-16, *Water Quality — Sampling — Part 16: Guidance on biotesting of samples*.

3 Principle

Copepods are exposed to a range of concentrations in seawater of a chemical substance, effluent or water sample. Mortality of the copepods is recorded after 24 h and 48 h.

The concentration which, in 48 h, kills 50% of exposed copepods under the conditions defined in this International Standard is determined. This concentration, known as the median lethal concentration, is designated 48 h LC50.

NOTE If possible, the concentration which kills 50% of the exposed copepods in 24 h is also determined. This concentration is designated 24 h LC50. It may be appropriate for certain purposes to extend the exposure period to 96 h and to determine the 96 h LC50.

An indication of the lowest concentration tested which kills all the copepods and the highest concentration tested which does not kill any of the copepods is desirable and provides useful information in cases where the 48 h LC50 cannot be determined.

The test is carried out in one or two stages:

- a preliminary test which determines the range of concentrations to be tested in the definitive test and gives an approximate value of the 48 h LC50 (and where appropriate, the 24 h LC50).