
**Water quality — Fresh water algal growth
inhibition test with unicellular green algae**

*Qualité de l'eau — Essai d'inhibition de la croissance des algues d'eau
douce avec des algues vertes unicellulaires*



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Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle	2
5 Reagents and media	2
6 Apparatus	4
7 Procedure	5
7.1 Preparation of growth medium	5
7.2 Preparation of pre-culture and inoculum	5
7.3 Choice of test sample concentrations	5
7.4 Preparation of test sample and stock solutions	5
7.5 Preparation of test and control batches	6
7.6 Incubation	6
7.7 Measurements	7
8 Validity criteria	7
9 Calculation	7
9.1 Plotting of growth curves	7
9.2 Calculation of percentage inhibition	8
9.3 Determination of E_rC_x (e.g. E_rC_{10} and E_rC_{50})	8
10 Expression of results	8
11 Interpretation of results	9
12 Precision	9
13 Test report	9
Annex A (informative) Rapid screening of waste water algal growth inhibition	11
Annex B (informative) Test procedure with algae from algal beads, with direct measurement of algal growth in spectrophotometric cells	14
Annex C (informative) Procedure for immobilization of algae in alginate beads	19
Bibliography	21

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 8692 was prepared by Technical Committee ISO/TC 147, *Water quality*, Subcommittee SC 5, *Biological methods*.

This third edition cancels and replaces the second edition (ISO 8692:2004), which has been technically revised.

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WARNING — Persons using this International Standard should be familiar with normal laboratory practice. This International Standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any national regulatory conditions.

IMPORTANT — It is absolutely essential that tests conducted in accordance with this International Standard be carried out by suitably qualified staff.

1 Scope

This International Standard specifies a method for the determination of the growth inhibition of unicellular green algae by substances and mixtures contained in water or by waste water. This method is applicable for substances that are easily soluble in water.

With modifications to this method, as specified in ISO 14442 and ISO 5667-16, the inhibitory effects of poorly soluble organic and inorganic materials, volatile compounds, heavy metals and waste water can be tested.

A rapid algal growth inhibition screening test for waste water is described in Annex A.

An alternative test procedure with algae from algal beads, with direct measurement of algal growth in spectrophotometric cells, is described in Annex B.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

ISO/TR 11044, *Water quality — Scientific and technical aspects of batch algae growth inhibition tests*

ISO 14442, *Water quality — Guidelines for algal growth inhibition tests with poorly soluble materials, volatile compounds, metals and waste water*

ISO/TS 20281, *Water quality — Guidance on statistical interpretation of ecotoxicity data*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 cell density

n

number of cells per volume of medium

NOTE Cell density is expressed in cells per millilitre.