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

Qualité de l'eau — Lignes directrices pour essais d'inhibition de la croissance algale avec matières peu solubles, composés volatiles, métaux et eaux résiduaires

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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 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.

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

International Standard ISO 14442 was prepared by Technical Committee ISO/TC 147, *Water quality*, Subcommittee SC 5, *Biological methods*.

Annex A of this International Standard is for information only.

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

1 Scope

This International Standard provides guidelines for testing substances for algal growth-inhibition that are difficult to test and thus not covered by the methods described in ISO 8692 and ISO 10253.

Guidelines are given for preparing the substance for testing and for carrying out an appropriate test. This International Standard is applicable to the following test substances:

a) poorly soluble pure organic compounds;

b) poorly soluble mixtures of organic substances;

c) poorly soluble inorganic materials;

d) volatile substances;

e) waste waters and environmental samples containing water and sediments;

f) coloured and/or turbid samples;

g) compounds of heavy metals.

The following methods of addition are covered:

— direct;

— dispersion;

— water-soluble and water-accommodated fractions.

Some guidelines related to analytical procedures and interpretation of results have also been included.

References to documents describing the background for the testing of difficult substances are given in the Bibliography.

2 Analytical characterization of test materials and confirmation of concentrations and stability

Analytical characterization of test substances and materials and the confirmation of their concentrations and stability in the testing environment is of major concern to regulatory authorities. Such activities are usually not an integral part of International Standards concerning algal growth inhibition test methods.

However, there may be situations where analysis may assist in defining the appropriate exposure conditions for test materials and chemicals, and/or in the interpretation of the results.