

Water quality — Evaluation of the aerobic biodegradability of organic compounds at low concentrations —

Part 2: Continuous flow river model with attached biomass

ICS 13.060.70

National foreword

This British Standard reproduces verbatim ISO 14592-2:2002 and implements it as the UK national standard.

The UK participation in its preparation was entrusted by Technical Committee EH/3, Water quality, to Subcommittee EH/3/5, Biological methods, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international publications referred to in this document may be found in the *BSI Catalogue* under the section entitled “International Standards Correspondence Index”, or by using the “Search” facility of the *BSI Electronic Catalogue* or of British Standards Online.

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Summary of pages

This document comprises a front cover, an inside front cover, the ISO title page, pages ii to v, a blank page, pages 1 to 16, an inside back cover and a back cover.

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Water quality — Evaluation of the aerobic biodegradability of organic compounds at low concentrations —

Part 2: Continuous flow river model with attached biomass

*Qualité de l'eau — Évaluation de la biodégradabilité aérobie des composés
organiques présents en faibles concentrations —*

Partie 2: Modèle de cours d'eau à courant continu avec biomasse associée



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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.

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 part of ISO 14592 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 14592-2 was prepared by Technical Committee ISO/TC 147, *Water quality*, Subcommittee SC 5, *Biological methods*.

ISO 14592 consists of the following parts, under the general title *Water quality — Evaluation of the aerobic biodegradability of organic compounds at low concentrations*:

- *Part 1: Shake-flask batch test with surface water or surface water/sediment suspensions*
- *Part 2: Continuous flow river model with attached biomass*

This corrected version of ISO 14592-2:2002 incorporates corrections to

- the term numbers 3.1.10 and 3.1.11;
- the reference given in the last line of 5.2;
- the reference given in the second line of 6.1.3;
- the reference given in the second line of 6.1.5;
- the reference given in the first line of 8.1.1;
- the reference given in the second line of 8.1.2;
- the reference given in the second line of the second paragraph of 8.2;
- the reference given in the third line of the second paragraph of 8.3
- the reference given in the fifth line of the first paragraph of 8.4;
- the reference given in the fourth line of the second paragraph of 8.4;
- the reference given in the second line of the first paragraph of 9.1;
- the reference given in the third line of the note under 9.2.

Introduction

This International Standard consists of two parts. Part 1 describes a die-away batch test for either surface water with or without added sediment in suspension simulating either a pelagic aquatic environment or a water-to-sediment interface. Part 2 describes a continuous flow system simulating a river with biomass attached to stationary surfaces.

The test has been specifically designed to provide information on the biodegradation behaviour and kinetics for test compounds at low concentrations, i.e. sufficiently low to simulate the biodegradation kinetics expected to occur in natural environmental systems.

This method is designed to determine the primary biodegradation in a continuously operating test system simulating a river. Before conducting this test, it is necessary to have information on the biodegradability behaviour of the test compound (e.g. at usual test concentrations in standard biodegradation tests) and, if possible, on abiotic degradability or elimination (e.g. photolysis, adsorption or stripping) under conditions which are comparable to those of the river model and relevant physico-chemical data (e.g. water-solubility, adsorption coefficient K_{oc}) so as to properly plan the experiment and interpret the results.

