EESTI STANDARD

EVS-EN ISO 11348-2:2001

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Water quality - Detemination of the inhibitory effect of water samples on the light emission of Vibrio fischeri (Luminescent bacteria test) - Part 2: Method using liquid-dried bacteria

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EESTI STANDARDIKESKUS

EESTI STANDARDI EESSÕNA	NATIONAL FOREWORD
Käesolev Eesti standard EVS-EN ISO 11348-2:2001 sisaldab Euroopa standardi EN ISO 11348-2:1998 ingliskeelset teksti. Käesolev dokument on jõustatud 18.06.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN ISO 11348-2:2001 consists of the English text of the European standard EN ISO 11348-2:1998. This document is endorsed on 18.06.2001 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: The standard describes three methods for determining the inhibition of the luminescence emitted by the marine bacterium Vibrio fischeri (NRRL B-11177). This part of the standard specifies a method using liquid-dried bacteria. This method is applicable to waste water; aqueous extracts and leachates; fresh water (surface or ground water) or salt and brackish waters, especially the monitoring of changes in inhibition towards bacteria; and pore water.	**Scope:** The standard describes three methods for determining the inhibition of the luminescence emitted by the marine bacterium Vibrio fischeri (NRRL B-11177). This part of the standard specifies a method using liquid-dried bacteria. This method is applicable to waste water; aqueous extracts and leachates; fresh water (surface or ground water) or salt and brackish waters, especially the monitoring of changes in inhibition towards bacteria; and pore water.

ICS 13.060.01

Võtmesõnad: bacteria, bioassay, biological tests, light emission, quality, water, water pollution, water tests

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Standardite reprodutseerimis- ja levitamisõigus kuulub Eesti Standardikeskusele

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 11348-2

December 1998

ICS 13.060.10

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English version

Water quality

Determination of the inhibitory effect of water samples on the light emission of *Vibrio fischeri* (Luminescent bacteria test)

Part 2: Method using liquid-dried bacteria (ISO 11348-2 : 1998)

Qualité de l'eau – Détermination de l'effet inhibiteur des échantillons d'eau sur la luminescence de *Vibrio fischeri* (Essai de bactéries luminescentes) – Partie 2: Méthode utilisant des bactéries déshydratées (ISO 11348-2 : 1998)

Wasserbeschaffenheit – Bestimmung der Hemmwirkung von Wasserproben auf die Lichtemission von *Vibrio fischeri* (Leuchtbakterientest) – Teil 2: Verfahren mit flüssig getrockneten Bakterien (ISO 11348-2 : 1998)

This European Standard was approved by CEN on 1998-12-15.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

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Ref. No. EN ISO 11348-2 : 1998 E

Foreword

International Standard

ISO 11348-2 : 1998 Water quality – Determination of the inhibitory effect of water samples on the light emission of *Vibrio fischeri* (Luminescent bacteria test) – Part 2: Method using liquid-dried bacteria,

which was prepared by ISO/TC 147 'Water quality' of the International Organization for Standardization, has been adopted by CEN/TC 230 'Water analysis', the Secretariat of which is held by DIN, as a European Standard.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by June 1999 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:

Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

Endorsement notice

The text of the International Standard ISO 11348-2 : 1998 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to International Standards are listed in Annex ZA (normative).

Contents

		Page
1	Scope	4
2	Normative references	4
3	Principle	5
4	Interferences	5
5	Reagents and materials	5
6	Apparatus	6
7	Sampling and sample pretreatment	7
8	Procedure	7
9	Evaluation	8
10	Expression of results	9
11	Criteria of validity	11
12	Precision	11
13	Test report	11
Annex A	Colour-correction method	12
Annex B	Dilution level D — Preparation of the dilution series	15
Annex C	Precision data	16

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Introduction

Measurements according to this International Standard can be carried out using freshly prepared bacteria, as well as freeze-dried or liquid-dried bacterial preparations.

Standardized work carried out by DIN NAW WI and ISO/TC 147/SC 5 WG 1 has shown that in special cases these different techniques may give different results, especially where water samples contain heavy metals.

Such varying sensitivity is caused by differences in media composition used in the preparation of freeze-dried or liquid-dried bacteria. These protective media influence the bioavailability of toxicants and/or the light emission of luminescent bacteria. This means that the origin and type of preparation need to be taken into account when interpreting the results. This can be difficult sometimes, as freeze-dried and liquid-dried bacteria may be obtained from different suppliers. This in turn can mean that the composition is not known in detail or cannot be revised by the user.

That is why in this International Standard additionally to toxicity measurements with liquid-dried bacteria (ISO 11348-2) and freeze-dried bacteria (ISO 11348-3) a procedure with freshly prepared bacteria is described (ISO 11348-1), the performance of which can be revised by the user in every detail.

The laboratories responsible for the results have the opportunity to select the most suitable technique based on expert judgement and information about the water sample to be tested.

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1 Scope

ISO 11348 describes three methods for determining the inhibition of the luminescence emitted by the marine bacterium *Vibrio fischeri* (NRRL B-11177). This part of ISO 11348 specifies a method using liquid-dried bacteria.

This method is applicable to:

— waste water,

— aqueous extracts and leachates,

— fresh waters (surface or ground waters) or salt and brackish waters, especially the monitoring of changes in inhibition towards bacteria,

— pore water.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 11348. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 11348 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 5667-16:1998, *Water quality — Guidance on biotesting of samples.*

ISO 7027:—[1], *Water quality — Determination of turbidity.*

1) To be published. (Revision of ISO 7027:1990)

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