

**Vee kvaliteet. Orgaaniliste ühendite
"täieliku" aeroobse biolagundatavuse
hindamine veekeskkonnas. Meetod
biokeemilise hapnikutarbe
määramisega (katse suletud pudeliga)**

Water quality - Evaluation in an aqueous medium of
the "ultimate" aerobic biodegradability of organic
compounds - Method by analysis of biochemical
oxygen demand (closed bottle test)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 10707:1999 sisaldab Euroopa standardi EN ISO 10707:1997 ingliskeelset teksti. Käesolev dokument on jõustatud 12.12.1999 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN ISO 10707:1999 consists of the English text of the European standard EN ISO 10707:1997. This document is endorsed on 12.12.1999 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.
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Käsitlusala: Käesolev rahvusvaheline standard esitab meetodi, et biokeemilise hapnikutarbe analüüsi abil hinnata etteantud kontsentratsiooniga orgaaniliste ühendite eemaldamist ja "täielikku" biolagundatavust veekeskkonnas aeroobsete mikroorganismide toimet. Kirjeldatud tingimused ei vasta alati paratamatult biolagundatavuse maksimaalväärtust võimaldavatele optimaaltingimustele. Meetod on kohaldatav kõikidele orgaanilistele ühenditele, mis põhilahuse valmistamiseks vees piisavalt lahustuvad. Meetod on kohaldatav vees halvasti lahustuvatele ühenditele, kui kasutatakse spetsiaalseid doseerimismeetodeid. Testitava ühendi madala kontsentratsiooni tõttu testi alguses pole tavaliselt spetsiaalsed ettevaatusabinõud testitavast ühendist mikroorganismide külvile avaldatava toksilise toime vältimiseks vajalikud. Vajaduse korral võib teha paralleeltesti inhibiitorite lisamisega.	Scope:
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ICS 13.060.70

Võtmesõnad: aeroobne bakter, biolagundatavus, kvaliteet, määramine, orgaanilised ühendid, testid, veetestid, vesi

ICS 13.060.40

Descriptors: Water quality, biodegradability, organic compounds, aerobic bacteria, oxygen demand.

English version

Water quality

**Evaluation in an aqueous medium of the ultimate
aerobic biodegradability of organic compounds**

Method by analysis of biochemical oxygen demand (closed bottle test)
(ISO 10707 : 1994)

Qualité de l'eau – Évaluation en milieu
aqueux de la biodégradabilité aérobie
ultime des composés organiques –
Méthode par analyse de la demande
biochimique en oxygène (essai en fiole
fermée) (ISO 10707 : 1994)

Wasserbeschaffenheit – Bestimmung
der vollständigen aeroben biologischen
Abbaubarkeit organischer Stoffe in
einem wäßrigen Medium – Verfahren
mittels Bestimmung des biochemischen
Sauerstoffbedarfs (geschlossener
Flaschentest) (ISO 10707 : 1994)

This European Standard was approved by CEN on 1997-10-30.

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.

CEN members are the national standards bodies of 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.

CEN

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

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

Foreword

International Standard

ISO 10707 : 1994 Water quality – Evaluation in an aqueous medium of the ultimate aerobic biodegradability of organic compounds – Method by analysis of biochemical oxygen demand (closed bottle test),

which was prepared by ISO/TC 147 'Water quality' of the International Organization for Standardization, has been adopted by Technical Committee 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 May 1998 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 10707 : 1994 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to international publications are listed in Annex ZA (normative).

WARNING — SAFETY PRECAUTIONS — Activated sludge and sewage may contain potentially pathogenic organisms. Therefore appropriate precautions should be taken when handling them. Toxic test compounds and those whose properties are unknown should be handled with care.

1 Scope

This International Standard specifies a method, by analysis of biochemical oxygen demand, for the evaluation in an aqueous medium of the "ultimate" biodegradability of organic compounds at a given concentration by aerobic microorganisms.

The conditions described in this International Standard do not necessarily always correspond to the optimal conditions for allowing the maximum value of biodegradation to occur.

The method applies to all organic compounds which are sufficiently water soluble to prepare a stock solution or poorly water soluble when using special dosing techniques.

Due to the low concentration of test compound at the beginning of the test, normally no special precautions for the toxicity of the test compound to the micro-organisms of the inoculum is necessary; if required a parallel inhibition test can be performed.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards

are subject to revision, and parties to agreements based on this International Standard 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 5813:1983, *Water quality — Determination of dissolved oxygen — Iodometric method*.

ISO 5814:1990, *Water quality — Determination of dissolved oxygen — Electrochemical probe method*.

ISO 6060:1989, *Water quality — Determination of the chemical oxygen demand*.

ISO 9887:1992, *Water quality — Evaluation of the aerobic biodegradability of organic compounds in an aqueous medium — Semi-continuous activated sludge method (SCAS)*.

ISO 9888:1991, *Water quality — Evaluation of the aerobic biodegradability of organic compounds in an aqueous medium — Static test (Zahn-Wellens method)*.

ISO 10304-2:—¹⁾, *Water quality — Determination of dissolved anions by liquid chromatography of ions — Part 2: Determination of bromide, chloride, nitrate, nitrite, orthophosphate and sulfite in waste water*.

1) To be published.