

Soil quality - Guidance on laboratory testing for biodegradation of organic chemicals in soil under anaerobic conditions (ISO 15473:2002)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 15473:2020 sisaldab Euroopa standardi EN ISO 15473:2020 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 15473:2020 consists of the English text of the European standard EN ISO 15473:2020.
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EUROPEAN STANDARD

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English Version

**Soil quality - Guidance on laboratory testing for
biodegradation of organic chemicals in soil under
anaerobic conditions (ISO 15473:2002)**

Qualité du sol - Lignes directrices relatives aux essais
en laboratoire pour la biodégradation de produits
chimiques organiques dans le sol sous conditions
anaérobies (ISO 15473:2002)

Bodenbeschaffenheit - Anleitung für
Laboratoriumsuntersuchungen zur biologischen
Abbaubarkeit von organischen Chemikalien im Boden
unter anaeroben Bedingungen (ISO 15473:2002)

This European Standard was approved by CEN on 13 April 2020.

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European foreword

The text of ISO 15473:2002 has been prepared by Technical Committee ISO/TC 190 "Soil quality" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 15473:2020 by Technical Committee CEN/TC 444 "Environmental characterization of solid matrices" the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2020, and conflicting national standards shall be withdrawn at the latest by October 2020.

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Endorsement notice

The text of ISO 15473:2002 has been approved by CEN as EN ISO 15473:2020 without any modification.

Contents

Foreword..... iv

Introduction..... v

1 Scope 1

2 Normative references 1

3 Terms and definitions 1

4 Principle..... 3

5 Materials 3

6 Collection, handling and storage of soil 6

7 Procedure 6

8 Expression of results 9

9 Test report 10

Bibliography..... 11

Introduction

Organic chemicals can be introduced into the soil both intentionally and accidentally, after which they can degrade as a result of biological action. For chemicals which do degrade, the rate of degradation can vary considerably, depending not only on the molecular structure of the chemical, but also on soil conditions such as temperature, water and oxygen availability which influence microbial activity. The activity of microorganisms often plays a major role in degradative processes.

ISO 11266 [3] gives general guidelines for the selection and method of tests to determine the biodegradation of organic chemicals in soils under aerobic conditions.

It is necessary to have laboratory tests available to estimate the rate and extent of biodegradation under anaerobic conditions, and to assess the capability of soil to degrade organic chemicals under these conditions.

This International Standard gives guidance for the method of tests to determine the biodegradation of organic chemicals in soils under anaerobic conditions.

Soil quality — Guidance on laboratory testing for biodegradation of organic chemicals in soil under anaerobic conditions

1 Scope

This International Standard gives guidance on the selection and method of appropriate tests for the determination of biodegradation of organic chemicals in soil samples under anaerobic conditions.

NOTE If the method is intended for tests in the framework of the registration of chemicals, an OECD Guideline on soil degradation [20] gives useful guidance on additional test requirements.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 10381-6:1993, *Soil quality — Sampling — Part 6: Guidance on the collection, handling and storage of soil for the assessment of aerobic microbial processes in the laboratory*

ISO 10390:1994, *Soil quality — Determination of pH*

ISO 10694:1995, *Soil quality — Determination of organic and total carbon after dry combustion (elementary analysis)*

ISO 11260:1994, *Soil quality — Determination of effective cation exchange capacity and base saturation level using barium chloride solution*

ISO 11261:1995, *Soil quality — Determination of total nitrogen — Modified Kjeldahl method*

ISO 11271, *Soil quality — Determination of redox potential — Field method*

ISO 11274:1998, *Soil quality — Determination of the water retention characteristic — Laboratory methods*

ISO 11277:1998, *Soil quality — Determination of particle size distribution in mineral soil material — Method by sieving and sedimentation*

ISO 14239:1997, *Soil quality — Laboratory incubation systems for measuring the mineralization of organic chemicals in soil under aerobic conditions*

3 Terms and definitions

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