SLOVENSKI STANDARD
SIST EN ISO 16387:2014

01-marec-2014

Kakovost tal - Vpliv onesnaževal na enhitreje (Enchytraeus sp.) - Ugotavljanje vplivov na razmnoževanje (ISO 16387:2014)

Soil quality - Effects of contaminants on Enchytraeidae (Enchytraeus sp.) - Determination of effects on reproduction (ISO 16387:2014)

Bodenbeschaffenheit - Wirkungen von Verunreinigungen auf Enchytraeidae (Enchytraeus sp.) - Bestimmung der Wirkungen auf die Reproduktion (ISO 16387:2014)

Qualité du sol - Effets des contaminants sur les Enchytraeidae (Enchytraeus sp.) - Détermination des effets sur la survie et la reproduction (ISO 16387:2014)

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13.080.30	Biološke lastnosti tal	Biological properties of soils

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English Version

Soil quality - Effects of contaminants on Enchytraeidae (Enchytraeus sp.) - Determination of effects on reproduction (ISO 16387:2014)

Qualité du sol - Effets des contaminants sur les Enchytraeidae (Enchytraeus sp.) - Détermination des effets sur la survie et la reproduction (ISO 16387:2014)

Bodenbeschaffenheit - Wirkungen von Verunreinigungen auf Enchytraeidae (Enchytraeus sp.) - Bestimmung der Wirkungen auf die Reproduktion (ISO 16387:2014)

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Foreword

This document (EN ISO 16387:2014) has been prepared by Technical Committee ISO/TC 190 “Soil quality” in collaboration with Technical Committee CEN/TC 345 “Characterization of soils” 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of an identical text or by endorsement, at the latest by July 2014, and conflicting national standards shall be withdrawn at the latest by July 2014.

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The text of ISO 16387:2014 has been approved by CEN as EN ISO 16387:2014 without any modification.

INTERNATIONAL STANDARD

ISO 16387

Second edition
2014-01-15

Soil quality — Effects of contaminants on *Enchytraeidae* (*Enchytraeus* sp.) — Determination of effects on reproduction

Qualité du sol — Effets des contaminants sur les Enchytraeidae *(*Enchytraeus *sp.) — Détermination des effets sur la survie et la reproduction*

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information.

The committee responsible for this document is ISO/TC 190, *Soil quality*, Subcommittee SC 4, *Biological methods*.

This second edition cancels and replaces the first edition (ISO 16387:2004), which has been technically revised.

Introduction

Ecotoxicological test systems are applied to obtain information about the effects of contaminants in soil and are proposed to complement conventional chemical analysis. ISO 15799 includes a list and short characterization of recommended and standardized test systems. Aquatic test systems with soil eluate are applied to obtain information about the fraction of contaminants potentially reaching the groundwater by the water path (retention function of soils), whereas terrestrial test systems are used to assess the habitat function of soils. For the latter, a standardized test system using Enchytraeidae (a chronic test with end-point reproduction) is proposed.

This International Standard describes a method that is based on the determination of acute and sublethal effects of contaminated soils to adult Enchytraeidae of the genus *Enchytraeus*. Optionally, the method can be used for testing substances added to standard soils (e.g. artificial soil) for their sublethal hazard potential to Enchytraeidae.

Soil-dwelling annelids of the genus *Enchytraeus* are ecologically relevant, i.e. they are abundant in many soils where earthworms are scarce, but can also reach high population densities in soils well inhabited by earthworms. Enchytraeidae can be used in laboratory tests as well as in semi-field and field studies. From a practical point of view, many *Enchytraeus* species are easy to handle and breed, and their generation time is significantly shorter than that of earthworms [the test duration for a reproduction test with Enchytraeidae is four weeks to six weeks, compared to eight weeks (12 weeks including synchronization) with earthworms]. In addition, a much smaller volume of soil is needed in the enchytraeid test compared to the amount needed in earthworm tests.

This International Standard has been drawn up taking into consideration test procedures recommended by the Organization for Economic Cooperation and Development (see[22],[24]).