SLOVENSKI STANDARD
SIST EN ISO 10872:2021

01-oktober-2021

Nadomešča:
SIST ISO 10872:2011

Kakovost vode in tal - Določanje učinkov strupenosti vzorcev usedlin in tal na rast, plodnost in razmnoževanje Caenorhabditis elegans (Nematoda) (ISO 10872:2020)

Water and soil quality - Determination of the toxic effect of sediment and soil samples on growth, fertility and reproduction of Caenorhabditis elegans (Nematoda) (ISO 10872:2020)

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Wasserbeschaffenheit - Bestimmung der toxischen Wirkung von Sediment- und Bodenproben auf Wachstum, Fertilität und Reproduktion von Caenorhabditis elegans (Nematoda) (ISO 10872:2020)

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Qualité de l'eau et du sol - Détermination de l'effet toxique d'échantillons de sédiment et de sol sur la croissance, la fertilité et la reproduction de Caenorhabditis elegans (Nematodes) (ISO 10872:2020)

Ta slovenski standard je istoveten z: **EN ISO 10872:2021**

ICS:

13.060.70	Preiskava bioloških lastnosti vode	Examination of biological properties of water
13.080.30	Biološke lastnosti tal	Biological properties of soils

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 10872

August 2021

ICS 13.060.70

English Version

Water and soil quality - Determination of the toxic effect of sediment and soil samples on growth, fertility and reproduction of Caenorhabditis elegans (Nematoda) (ISO 10872:2020)

Qualité de l'eau et du sol - Détermination de l'effet toxique d'échantillons de sédiment et de sol sur la croissance, la fertilité et la reproduction de Caenorhabditis elegans (Nematodes) (ISO 10872:2020)

Wasserbeschaffenheit und Bodenbeschaffenheit - Bestimmung der toxischen Wirkung von Sediment- und Bodenproben auf Wachstum, Fertilität und Reproduktion von Caenorhabditis elegans (Nematoda) (ISO 10872:2020)

This European Standard was approved by CEN on 18 July 2021.

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European foreword

The text of ISO 10872:2020 has been prepared by Technical Committee ISO/TC 147 "Water quality" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 10872:2021 by Technical Committee CEN/TC 230 "Water analysis" the secretariat of which is held by DIN.

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INTERNATIONAL STANDARD

ISO 10872

Second edition
2020-05

Water and soil quality — Determination of the toxic effect of sediment and soil samples on growth, fertility and reproduction of *Caenorhabditis elegans* (Nematoda)

Qualité de l'eau et du sol — Détermination de l'effet toxique d'échantillons de sédiment et de sol sur la croissance, la fertilité et la reproduction de Caenorhabditis elegans *(Nematodes)*

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CH-1214 Vernier, Geneva
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Foreword

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This document was prepared by Technical Committee ISO/TC 147, *Water quality*, Subcommittee SC 5, *Biological method.*

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This second edition cancels and replaces the first edition (ISO 10872:2010), which has been technically revised. The main changes compared to the previous edition are as follows:

— the title has been changed to achieve a better perception in the field soil toxicity testing;

— for soil testing, the method has been modified in terms of a reduced water content of the test material;

— cited references and standards have been refreshed;

— information on the control soil and restrictions for tested soils has been added;

— the document has been editorially revised.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

Nematodes are one of the most abundant and species-rich metazoans in sediments[1] and soils[2] and possess key positions in benthic and soil food webs due to the evolution of various feeding types (bacterial, algal, fungal and plant feeders, omnivores, predators see References [3] and [4]). Moreover, they are well acknowledged as environmental indicators for assessing the toxicity of chemicals and the quality of sediments and soils (see References [5], [6], [7], [8] and [9]).

The test organism *Caenorhabditis elegans* (Maupas, N2 *var*. Bristol) is a bacterivorous nematode that is found primarily in microbe-rich, decaying plant material (see Reference [10]) and belongs to the family of Rhabditidae, frequently found in terrestrial soils and aquatic sediments (see References [11] and [12]). Moreover, individuals of *C. elegans* were already found in sediments of polysaprobial fresh-water systems (see References [13] and [14]). Due to its easy cultivation and short life cycle[15], *C. elegans* has become a well-studied model organism in biomedical and ecotoxicological research (see References [16], [17] and [18]).

The test is designed for measurement of the response to dissolved and particle-bound substances[19]. It applies to the testing of sediments, soils, waste, pore water, elutriates and aqueous extracts (see e.g. References [20], [21], [22] and [23]).

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