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**Kakovost tal - Izogibalni preskus za določanje kakovosti tal in učinkov kemikalij na obnašanje - 2. del: Preskus s Folsomia candida iz rodu skakačev (Collembola) (ISO 17512-2:2011)**

Soil quality - Avoidance test for determining the quality of soils and effects of chemicals on behaviour - Part 2: Test with collembolans (Folsomia candida) (ISO 17512-2:2011)

Bodenbeschaffenheit - Vermeidungsprüfung zur Bestimmung der Bodenbeschaffenheit und der Auswirkungen von Chemikalien auf das Verhalten - Teil 2: Prüfung mit Collembolen (Folsomia candida) (ISO 17512-2:2011)

Qualité du sol - Essai d'évitement pour contrôler la qualité des sols et les effets des produits chimiques sur le comportement - Partie 2: Essai avec des collemboles (Folsomia candida) (ISO 17512-2:2011)

**Ta slovenski standard je istoveten z: EN ISO 17512-2:2020**

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13.080.30      Biološke lastnosti tal      Biological properties of soils

**SIST EN ISO 17512-2:2020**      en,fr,de

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EUROPEAN STANDARD

EN ISO 17512-2

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May 2020

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## Soil quality - Avoidance test for determining the quality of soils and effects of chemicals on behaviour - Part 2: Test with collembolans (*Folsomia candida*) (ISO 17512-2:2011)

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

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## European foreword

The text of ISO 17512-2:2011 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 17512-2:2020 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of an identical text or by endorsement, at the latest by November 2020, and conflicting national standards shall be withdrawn at the latest by November 2020.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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# INTERNATIONAL STANDARD

**ISO**  
**17512-2**

First edition  
2011-10-01

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## Soil quality — Avoidance test for determining the quality of soils and effects of chemicals on behaviour —

Part 2:

### Test with collembolans (*Folsomia candida*)

iTeh STANDARD PREVIEW  
(standards.iteh.ai)

Qualité du sol — Essai d'évitement pour contrôler la qualité des sols et  
les effets des produits chimiques sur le comportement —  
Partie 2 Essai avec des collembolés (*Folsomia candida*)

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**ISO 17512-2:2011(E)****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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 17512-2 was prepared by Technical Committee ISO/TC 190, *Soil quality*, Subcommittee SC 4, *Biological methods*.

ISO 17512 consists of the following parts, under the general title *Soil quality — Avoidance test for determining the quality of soils and effects of chemicals on behaviour*:

— *Part 1: Test with earthworms* (*Eisenia fetida* and *Eisenia andrei*)

— *Part 2: Test with collembolans* (*Folsomia candida*)

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## Introduction

The use of the avoidance behaviour of soil invertebrates as an indicator of unfavourable conditions allows a preliminary assessment of contaminated soils in a short period of time, with a high degree of sensitivity. Being rapid, cost-effective and ecologically relevant, the avoidance tests with earthworms were proposed to complement conventional chemical analysis. Supporting the results obtained in the chronic tests, the avoidance bioassays can be used as a first screening tool in the assessment of the habitat function of soils. Considering the fact that the avoidance response of soil invertebrates differs between species due to their distinct sensitivity to contaminants and modes of exposure, it is recommended to standardize a second rapid cost-effective and ecologically relevant avoidance bioassay.

Springtails have shown a distinct sensitivity towards several contaminants when compared with earthworms, complementing the information obtained in the avoidance tests with earthworms <sup>[1][2]</sup>. Until now, the species *Folsomia candida* has been the most commonly used collembolan test species due to a great facility to keep laboratory cultures and due to their high locomotor ability <sup>[3]</sup>. *Folsomia candida* is considered to be a hemiedaphic species, meaning that it lives mainly in the soil. Furthermore, this species is already used in ISO 11267.

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