

**SLOVENSKI STANDARD
SIST EN ISO 21268-1:2020****01-januar-2020****Nadomešča:****SIST-TS CEN ISO/TS 21268-1:2010**

Kakovost tal - Postopki izluževanja za nadaljnje kemijsko in ekotoksikološko preskušanje tal in tlem podobnih materialov - 1. del: Šaržni preskus z razmerjem tekoče/trdno 2 l/kg suhe snovi (ISO 21268-1:2019)

Soil quality - Leaching procedures for subsequent chemical and ecotoxicological testing of soil and soil-like materials - Part 1: Batch test using a liquid to solid ratio of 2 l/kg dry matter (ISO 21268-1:2019)

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Bodenbeschaffenheit - Elutionsverfahren für die anschließende chemische und ökotoxikologische Untersuchung von Boden und von Bodenmaterialien - Teil 1: Schüttelverfahren mit einem Flüssigkeits/Feststoffverhältnis von 2 l/kg Trockenmasse (ISO 21268-1:2019) <https://standards.iteh.ai/catalog/standards/sist/eec5ae5e-2d33-43ce-a77a-f3b35141d7f5/sist-en-iso-21268-1-2020>

Qualité du sol - Modes opératoires de lixiviation en vue d'essais chimiques et écotoxicologiques ultérieurs des sols et matériaux analogues au sol - Partie 1: Essai en bâchée avec un rapport liquide/solide de 2 l/kg de matière sèche (ISO 21268-1:2019)

Ta slovenski standard je istoveten z: EN ISO 21268-1:2019**ICS:**

13.080.05 Preiskava tal na splošno Examination of soils in general

SIST EN ISO 21268-1:2020**en,fr,de**

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EUROPEAN STANDARD

EN ISO 21268-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

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Supersedes CEN ISO/TS 21268-1:2009

English Version

Soil quality - Leaching procedures for subsequent chemical and ecotoxicological testing of soil and soil-like materials - Part 1: Batch test using a liquid to solid ratio of 2 l/kg dry matter (ISO 21268-1:2019)

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This European Standard was approved by CEN on 1 September 2019.

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[SIST EN ISO 21268-1:2020](#)

This European Standard exists 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 CEN-CENELEC Management Centre has the same status as the official versions.

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European foreword

This document (EN ISO 21268-1:2019) has been prepared by Technical Committee ISO/TC 190 "Soil quality" in collaboration with Technical Committee CEN/TC 444 "Test methods for 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 April 2020, and conflicting national standards shall be withdrawn at the latest by April 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.

This document supersedes CEN ISO/TS 21268-1:2009.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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INTERNATIONAL
STANDARDISO
21268-1First edition
2019-09

**Soil quality — Leaching procedures
for subsequent chemical and
ecotoxicological testing of soil and
soil-like materials —**

Part 1:

**Batch test using a liquid to solid ratio
of 2 l/kg dry matter**

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*Qualité du sol — Modes opératoires de lixiviation en vue d'essais
chimiques et écotoxicologiques ultérieurs des sols et matériaux
analogues au sol —*[https://standards.iteh.ai/catalog/standards/sist/cec5ae5e-2d33-43ce-a77a-](https://standards.iteh.ai/catalog/standards/sist/cec5ae5e-2d33-43ce-a77a-f3b3514147f5/sist-en-iso-21268-1-2020)[f3b3514147f5/sist-en-iso-21268-1-2020](https://standards.iteh.ai/catalog/standards/sist/cec5ae5e-2d33-43ce-a77a-f3b3514147f5/sist-en-iso-21268-1-2020)*Partie 1: Essai en bûchée avec un rapport liquide/solide de 2 l/kg de
matière sèche*Reference number
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CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
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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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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 190, *Soil quality*, Subcommittee SC 7, *Impact assessment*.

This first edition of ISO 21268-1:2019 cancels and replaces the first edition (ISO/TS 21268-1:2007), which has been technically revised. The main changes compared to the previous edition are as follows:

- the maximum grain size has been changed to <2 mm as usual for soil;
- the demineralized water has been added as possible leachant;
- [7.1](#) and [7.2](#) have been renumbered and renamed to read [7.1](#) "Particle size" and [7.2](#) "Sample preparation";
- [12.1](#) "General" and [12.2](#) "Validation results obtained for DIN 19529" have been added;
- [A.3.6](#) "Special requirements for tests considering semi-volatile substances" has been added;
- a new informative [Annex C](#) "Calculation of centrifugation duration depending on centrifugation speed and rotor dimensions" has been added;
- references in [Clause 2](#) and the Bibliography have been updated.

A list of all parts in the ISO 21268 series can be found on the ISO website.

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.

Introduction

In various countries, tests have been developed to characterize and assess the substances which can be released from materials. The release of soluble substances upon contact with water is regarded as a main mechanism of release, which results in a potential risk to the environment during the use or disposal of materials. The intent of these tests is to identify the leaching properties of materials. The complexity of the leaching process makes simplifications necessary^[1].

Not all of the relevant aspects of leaching behaviour can be addressed in one standard (see description of influencing factors in [Annex A](#)).

Tests to characterize the behaviour of materials can generally be divided into three categories addressed in ISO 18772^[2] and EN 12920^[3]. The relationships between these tests are summarized below.

- a) “Basic characterization” tests are used to obtain information on the short- and long-term leaching behaviour and characteristic properties of materials. Liquid/solid ratios (L/S), leachant composition, factors controlling leachability, such as pH, redox potential, complexing capacity, role of dissolved organic carbon (DOC), ageing of material and physical parameters, are addressed in these defined tests.
- b) “Compliance” tests are used to determine whether the material complies with a specific behaviour or with specific reference values. These tests focus on key variables and leaching behaviour previously identified by basic characterisation tests.
- c) “On-site verification” tests are used as a rapid check to confirm that the material is the same as that which has been subjected to the compliance test(s). On-site verification tests are not necessarily leaching tests.

The test procedure described in this method belongs to category b): compliance tests.

This document was originally elaborated on the basis of EN 12457-1:2004^[4]. Especially, modifications considering requirements on subsequent ecotoxicological testing and analysis of organic substances have been included. Validation results have been adopted from DIN 19529^[5].

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