SLOVENSKI STANDARD
SIST ISO 11269-2:2006

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Kakovost tal ï Določ anje uč inka onesnaž eval na rastlinstvo ï 2. del: Uč inki kemikalij na vznik in rast viš jih rastlin

Soil quality -- Determination of the effects of pollutants on soil flora -- Part 2: Effects of chemicals on the emergence and growth of higher plants

Qualité du sol -- Détermination des effets des polluants sur la flore du sol -- Partie 2: Effets des substances chimiques sur l'émergence et la croissance des végétaux supérieurs

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INTERNATIONAL STANDARD

ISO 11269-2

Second edition
2005-11-01

Soil quality — Determination of the effects of pollutants on soil flora —

Part 2: Effects of chemicals on the emergence and growth of higher plants

Qualité du sol — Détermination des effets des polluants sur la flore du sol —

Partie 2: Effets des substances chimiques sur l'émergence et la croissance des végétaux supérieurs

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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.

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 11269-2 was prepared by Technical Committee ISO/TC 190, *Soil quality*, Subcommittee SC 4, *Biological methods*.

This second edition cancels and replaces the first edition (ISO:11269-2:1995) which has been technically revised.

ISO 11269 consists of the following parts, under the general title *Soil quality — Determination of the effects of pollutants on soil flora*:

— *Part 1: Method for the measurement of inhibition of root growth*

— *Part 2: Effects of chemicals on the emergence and growth of higher plants*

Introduction

This part of ISO 11269 describes a method for the evaluation of soil quality following the addition of chemicals or after contamination of an unknown type. Before assessing the effects on plant growth of a chemical incorporated in soil, information on the solubility in water and in organic solvents, and the vapour pressure of the test substance is recommended. Preferably, the molecular formula, partition coefficient (water/octanol), and chemical and biological stability should be available to the laboratory. All physical and biological parameters should be considered when interpreting the results of the test.

The test, as written, assesses the effect on emergence and plant growth of a chemical incorporated in soil. In case of contaminated soil, the individual chemicals are unidentified and therefore correct information on solubility, vapour pressure and molecular formula etc. cannot be selected. No incorporation is recommended, but it may be necessary to dilute the contaminated soil with an uncontaminated control soil or sand before testing.

Soil quality — Determination of the effects of pollutants on soil flora —

Part 2: Effects of chemicals on the emergence and growth of higher plants

1 Scope

This part of ISO 11269 describes a method that is applicable to the determination of possible toxic effects of solid or liquid chemicals incorporated in soil on the emergence and early stages of growth and development of a variety of terrestrial plants. It does not give an indication of damage resulting from direct contact of seedlings with the chemical in the vapour or liquid phase outside the soil environment.

The method is also applicable to the comparison of soils of known and unknown quality. Information on how to adapt the method for this purpose is given in Annex B.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 10381-6, *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, *Soil quality — Determination of pH*

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

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

3 Terms and definitions

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

3.1
emergence
appearance of the coleoptile or cotyledon above the soil