INTERNATIONAL STANDARD

**ISO 17126**

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# Soil quality — Determination of the effects of pollutants on soil flora — Screening test for emergence of lettuce seedlings (*Lactuca sativa* L.)

*Qualité du sol — Détermination des effets des polluants sur la flore du sol — Essai de détection de l'émergence des plantules de laitue (*Lactuca sativa *L.)*

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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 17126 was prepared by Technical Committee ISO/TC 190, *Soil quality*, Subcommittee SC 4, *Biological methods*.



 

## Introduction

For the assessment of the suitability of soil to sustain living organisms, there is a need for simple, rapid, inexpensive biological test methods as a complement to chemical analysis. The method described in this International Standard has been developed for the testing of contaminated soil as well as other contaminated samples. It is cost effective and can be conducted within a short period of time. Furthermore, the test organism is easily available, it does not require advanced equipment for measurements or for growing plants, and it can be conducted by any skilled laboratory technician without special training.

This International Standard is based on US EPA 600/3-88-029 (1989)[1].

# Soil quality — Determination of the effects of pollutants on soil flora — Screening test for emergence of lettuce seedlings (*Lactuca sativa* L.)



## 1 Scope

This International Standard specifies test procedures for the determination of effects of contaminated soils or other contaminated samples on the emergence of lettuce seeds.

This International Standard is applicable to contaminated soils, soil materials, compost, sludge and chemical testing. It is applicable to the measurement of effects of substances deliberately added to the soil and to the comparison of soils of known and unknown quality.

This International Standard is not applicable to volatile contaminants.

## 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 11265, *Soil quality — Determination of the specific electrical conductivity*

ISO 11267:1999, *Soil quality — Inhibition of reproduction of Collembola* (Folsomia candida*) by soil pollutants*

ISO 11274, *Soil quality — Determination of the water-retention characteristic – Laboratory methods*

ISO 11465, *Soil quality — Determination of dry matter and water content on a mass basis — Gravimetric method*

## 3 Terms and definitions

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

**3.1**
**seedling emergence**
appearance of the seedling (i.e. visible seedling) above the surface of the cover material

**3.2**
**EC***x*
concentration of test material (or test substance) estimated to reduce the seedling emergence by $x$ % as compared to the control