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## **Soil quality — Effects of pollutants on *Enchytraeidae* (*Enchytraeus* sp.) — Determination of effects on reproduction and survival**

*Qualité du sol — Effets des polluants sur les Enchytraeidae  
(Enchytraeus sp.) — Détermination des effets sur la reproduction et la  
survie*



Reference number  
ISO 16387:2004(E)

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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.

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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 16387 was prepared by Technical Committee ISO/TC 190, *Soil quality*, Subcommittee SC 4, *Biological methods*.

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## Introduction

This International Standard has been drawn up taking into consideration test procedures recommended by the International Organization for Standardization (ISO) and the Organization for Economic Cooperation and Development (OECD) (see Clause 2 and Bibliography).

The method described was developed for testing the effects of chemicals added to an artificial soil. An adaptation for testing or comparing soils to assess, for example, the effects of remediation treatments is given in Annex B. It can also be adapted for assessing sublethal effects and determining no-effect levels for pesticides.

Soil-dwelling annelids of the genus *Enchytraeus* are ecologically relevant, i.e. they are abundant in many soils where earthworms are scarce, but can also reach high population densities in soils well inhabited by earthworms. *Enchytraeidae* can be used in laboratory tests as well as in semi-field and field studies. From a practical point of view, many *Enchytraeus* species are easy to handle and breed, and their generation time is significantly shorter than that of earthworms [the test duration for a reproduction test with *Enchytraeidae* is 4 weeks to 6 weeks, compared to 12 weeks (including synchronization) with earthworms].