



SLOVENSKI STANDARD SIST EN ISO 20963:2011

01-november-2011

Kakovost tal - Vpliv onesnaževal na ličinke žuželk (*Oxythyrea funesta*) - Določevanje akutne strupenosti (ISO 20963:2005)

Soil quality - Effects of pollutants on insect larvae (*Oxythyrea funesta*) - Determination of acute toxicity (ISO 20963:2005)

Bodenbeschaffenheit - Auswirkungen von Schadstoffen auf Insektenlarven (*Oxythyrea funesta*) - Bestimmung der akuten Toxizität (ISO 20963:2005)

Qualité du sol - Effets des polluants vis-à-vis des larves d'insectes (*Oxythyrea funesta*) - Détermination de la toxicité aiguë (ISO 20963:2005)

<https://standards.iteh.ai/catalog/standards/sist/b7d28b05-1a1e-4cae-9d7a-102f36de9ac8/sist-en-iso-20963-2011>

Ta slovenski standard je istoveten z: **EN ISO 20963:2011**

ICS:

13.080.30 Biološke lastnosti tal Biological properties of soils

SIST EN ISO 20963:2011

en,fr,de

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 20963:2011

<https://standards.iteh.ai/catalog/standards/sist/b7d28b05-1a1e-4cae-9d7a-102f36de9ac8/sist-en-iso-20963-2011>

EUROPEAN STANDARD

EN ISO 20963

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2011

ICS 13.080.30

English Version

Soil quality - Effects of pollutants on insect larvae (*Oxythyrea funesta*) - Determination of acute toxicity (ISO 20963:2005)

Qualité du sol - Effets des polluants vis-à-vis des larves d'insectes (*Oxythyrea funesta*) - Détermination de la toxicité aiguë (ISO 20963:2005)

Bodenbeschaffenheit - Auswirkungen von Schadstoffen auf Insektenlarven (*Oxythyrea funesta*) - Bestimmung der akuten Toxizität (ISO 20963:2005)

This European Standard was approved by CEN on 10 June 2011.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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.

CEN members are the national standards bodies of 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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

[SIST EN ISO 20963:2011](https://standards.iteh.ai/catalog/standards/sist/b7d28b05-1a1e-4cae-9d7a-102f36de9ac8/sist-en-iso-20963-2011)

<https://standards.iteh.ai/catalog/standards/sist/b7d28b05-1a1e-4cae-9d7a-102f36de9ac8/sist-en-iso-20963-2011>



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....3

**iTeh STANDARD PREVIEW
(standards.iteh.ai)**

SIST EN ISO 20963:2011

<https://standards.iteh.ai/catalog/standards/sist/b7d28b05-1a1e-4cae-9d7a-102f36de9ac8/sist-en-iso-20963-2011>

Foreword

The text of ISO 20963:2005 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 20963:2011 by Technical Committee CEN/TC 345 "Characterization of soils" 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 December 2011, and conflicting national standards shall be withdrawn at the latest by December 2011.

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

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

iTeh STANDARD PREVIEW
Endorsement notice
(standards.iteh.ai)

The text of ISO 20963:2005 has been approved by CEN as a EN ISO 20963:2011 without any modification.

[SIST EN ISO 20963:2011
https://standards.iteh.ai/catalog/standards/sist/b7d28b05-1a1e-4cae-9d7a-102f36de9ac8/sist-en-iso-20963-2011](https://standards.iteh.ai/catalog/standards/sist/b7d28b05-1a1e-4cae-9d7a-102f36de9ac8/sist-en-iso-20963-2011)

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 20963:2011

<https://standards.iteh.ai/catalog/standards/sist/b7d28b05-1a1e-4cae-9d7a-102f36de9ac8/sist-en-iso-20963-2011>

INTERNATIONAL
STANDARD

ISO
20963

First edition
2005-04-01

**Soil quality — Effects of pollutants on
insect larvae (*Oxythyrea funesta*) —
Determination of acute toxicity**

*Qualité du sol — Effets des polluants vis-à-vis des larves d'insectes
(*Oxythyrea funesta*) — Détermination de la toxicité aiguë*

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 20963:2011

<https://standards.iteh.ai/catalog/standards/sist/b7d28b05-1a1e-4cae-9d7a-102f36de9ac8/sist-en-iso-20963-2011>



Reference number
ISO 20963:2005(E)

© ISO 2005

ISO 20963:2005(E)**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 20963:2011](https://standards.iteh.ai/catalog/standards/sist/b7d28b05-1a1e-4cae-9d7a-102f36de9ac8/sist-en-iso-20963-2011)

<https://standards.iteh.ai/catalog/standards/sist/b7d28b05-1a1e-4cae-9d7a-102f36de9ac8/sist-en-iso-20963-2011>

© ISO 2005

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle	2
5 Test environment	3
6 Reagents	3
7 Apparatus	4
8 Procedure	4
8.1 Test design	4
8.2 Preparation of test mixture	5
8.3 Preparation of control container	6
8.4 Food addition	6
8.5 Introduction of the biological material	6
8.6 Test conditions and measurements	6
8.7 Reference substance	6
9 Expression of results	7
9.1 Calculation	7
9.2 Expression of results	8
10 Validity of the test	8
11 Test report	8
Annex A (informative) Example of breeding technique for <i>Oxythyrea funesta</i>	9
Annex B (informative) Results of the collaborative trial carried out in France	11
Bibliography	12

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 20963 was prepared by Technical Committee ISO/TC 190, *Soil quality*, Subcommittee SC 4, *Biological methods*.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 20963:2011](https://standards.iteh.ai/catalog/standards/sist/b7d28b05-1a1e-4cae-9d7a-102f36de9ac8/sist-en-iso-20963-2011)

<https://standards.iteh.ai/catalog/standards/sist/b7d28b05-1a1e-4cae-9d7a-102f36de9ac8/sist-en-iso-20963-2011>

Introduction

This International Standard describes a method for the determination of the acute toxicity of contaminated soils and chemicals to the larvae of *Oxythyrea funesta*, a phytophagous coleopteran (*Scarabaeidae*, *Cetoniinae*) with wide geographic distribution (Europe, North Africa and the Middle East).

Oxythyrea funesta has many characteristics which make it suitable for soil quality monitoring or testing effects of chemicals:

- ecological relevance: this type of organism contributes in many ways to soil structure by stimulating soil aeration and drainage;
- the first stages of development, i.e. incubation of eggs, larval cycle and pupation, are underground;
- the larvae of *Oxythyrea funesta* are tolerant to modifications of the test substrate granulometry;
- this species can be bred under controlled conditions.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 20963:2011](https://standards.iteh.ai/catalog/standards/sist/b7d28b05-1a1e-4cae-9d7a-102f36de9ac8/sist-en-iso-20963-2011)

<https://standards.iteh.ai/catalog/standards/sist/b7d28b05-1a1e-4cae-9d7a-102f36de9ac8/sist-en-iso-20963-2011>