

**Soil quality - Guidelines for the identification of target compounds by gas chromatography and mass spectrometry (ISO 22892:2006)**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 22892:2011 sisaldab Euroopa standardi EN ISO 22892:2011 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 29.07.2011 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 29.06.2011.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 22892:2011 consists of the English text of the European standard EN ISO 22892:2011.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 29.07.2011 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 29.06.2011.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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ICS 13.080.05

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English Version

**Soil quality - Guidelines for the identification of target  
compounds by gas chromatography and mass spectrometry  
(ISO 22892:2006)**

Qualité du sol - Lignes directrices pour l'identification de  
composés cibles par chromatographie en phase gazeuse  
et spectrométrie de masse (ISO 22892:2006)

Bodenbeschaffenheit - Anleitungen für die Identifizierung  
von Zielverbindungen durch Gaschromatographie und  
Massenspektrometrie (ISO 22892:2006)

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**Management Centre: Avenue Marnix 17, B-1000 Brussels**

## Foreword

The text of ISO 22892:2006 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 22892:2011 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of an identical text or by endorsement, at the latest by December 2011, and conflicting national standards shall be withdrawn at the latest by December 2011.

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### Endorsement notice

The text of ISO 22892:2006 has been approved by CEN as a EN ISO 22892:2011 without any modification.

# Contents

Page

Foreword.....	iv
Introduction.....	v
1 Scope .....	1
2 Principle.....	1
3 Terms and definitions.....	1
4 Apparatus .....	2
5 Procedure .....	3
5.1 Retention times.....	3
5.2 Mass spectra, selection of diagnostic ions .....	3
6 Qualification .....	4
6.1 GC-MS procedure .....	4
6.2 Additional information.....	5
6.3 Reporting the presence of target compounds.....	7
6.3.1 Identification.....	7
6.3.2 Indication .....	8
6.3.3 Absence of the target compound (< detection limit).....	8
7 Test report .....	8
Annex A (informative) Diagnostic ions to be used for identification using GC-MS.....	9
Annex B (informative) Examples .....	12
Annex C (informative) Examples of Spectra.....	18
Bibliography .....	20

## Introduction

In many analytical standards, use is made of gas chromatography (GC) in combination with mass spectrometric (MS) detection. This detector is a powerful tool provided it is properly used. In this International Standard, guidelines are given for the identification of target compounds. This International Standard can be used in combination with specific analytical standards or in combination with any GC-MS procedure. The result of the procedure described is: identified, indicated or absent.

# Soil quality — Guidelines for the identification of target compounds by gas chromatography and mass spectrometry

## 1 Scope

This International Standard gives criteria for gas chromatography and mass spectrometry (GC-MS) identification of target compounds in soil samples. This International Standard is intended for use with standards developed for the determination of specific compounds. The identification criteria are based on the comparison of retention times followed by interpretation of the electron ionization mass spectra, or if necessary, additional mass spectrometric techniques and other relevant factors.

NOTE This International Standard is also applicable for other environmental samples.

## 2 Principle

A target compound is identified if the measured values meet the criteria specified in this International Standard or in the standard in which the procedures are described to analyse the target compound. Criteria are based on the relative retention times and the intensity of diagnostics ions selected in the scan mode and measured in the selected ion mode (SIM), and other relevant factors. Additional information regarding diagnostic ions from specific international standards on the analysis of the target compound can be used. The principle of identification points is used.

## 3 Terms and definitions

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

### 3.1

#### **target compound**

selected component, the presence or absence of which is being established

NOTE This definition also applies to derivatives of the original compound which are formed during an intentional derivatization procedure or on-line derivatization.

### 3.2

#### **standard compound**

target compound with the highest possible purity, which can be used as a reference during the analysis

NOTE Any impurities should not have any influence on the mass spectrum of the standard compound.

### 3.3

#### **retention time standard**

compound that is added to the sample (or to the sample extract) and to the calibration standard solution, and used to calculate the relative retention times of the target compounds

NOTE The retention time standard may be identical to the internal standard(s).