BRITISH STANDARD

BS EN ISO
22892:2011

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

ICS 13.080.05

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National foreword

This British Standard is the UK implementation of EN ISO 22892:2011. It is identical to ISO 22892:2006. It supersedes BS ISO 22892:2006, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EH/4, Soil quality.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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31 August 2011	This corrigendum renumbers BS ISO 22892:2006 as BS EN ISO 22892:2011

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EUROPEAN STANDARD

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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)

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

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of an identical text or by endorsement, at the latest by December 2011, and conflicting national standards shall be withdrawn at the latest by December 2011.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

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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.

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ISO 22892 was prepared by Technical Committee ISO/TC 190, *Soil quality*, Subcommittee SC 3, *Chemical methods and soil characteristics*.

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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.

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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).

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