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| STN | Kvalita vody. Stanovenie vybratých prostriedkov na ochranu rastlín a biocídnych výrobkov. Metóda plynovej chromatografie s hmotnostnou spektrometriou (GC-MS) po mikroextrakcii na tuhej fáze (SPME) (ISO 27108: 2010). | STN EN ISO 27108 75 7503 |
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Water quality - Determination of selected plant treatment agents and biocide products - Method using solid-phase microextraction (SPME) followed by gas chromatography-mass spectrometry (GC-MS) (ISO 27108:2010)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 12/13

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EUROPEAN STANDARD

EN ISO 27108

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2013

ICS 13.060.50

English Version

**Water quality - Determination of selected plant treatment agents
and biocide products - Method using solid-phase microextraction
(SPME) followed by gas chromatography-mass spectrometry
(GC-MS) (ISO 27108:2010)**

Qualité de l'eau - Détermination d'agents de traitement et
de produits d'usine sélectionnés - Méthode utilisant une
micro-extraction en phase solide (MEPS) suivie d'une
chromatographie en phase gazeuse-spectrométrie de
masse (CG-SM) (ISO 27108:2010)

Wasserbeschaffenheit - Bestimmung ausgewählter
Pflanzenschutzmittel und Biozidprodukte - Verfahren
mittels Festphasenmikroextraktion (SPME) gefolgt von der
Gaschromatographie und Massenspektrometrie (GC-MS)
(ISO 27108:2010)

This European Standard was approved by CEN on 12 April 2013.

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Foreword

The text of ISO 27108:2010 has been prepared by Technical Committee ISO/TC 147 "Water quality" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 27108:2013 by Technical Committee CEN/TC 230 "Water analysis" the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by February 2014, and conflicting national standards shall be withdrawn at the latest by February 2014.

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Endorsement notice

The text of ISO 27108:2010 has been approved by CEN as EN ISO 27108:2013 without any modification.

**Water quality — Determination of
selected plant treatment agents and
biocide products — Method using solid-
phase microextraction (SPME) followed
by gas chromatography-mass
spectrometry (GC-MS)**

*Qualité de l'eau — Détermination d'agents de traitement et de produits
d'usine sélectionnés — Méthode utilisant une micro-extraction en phase
solide (MEPS) suivie d'une chromatographie en phase gazeuse-
spectrométrie de masse (CG-SM)*



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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 27108 was prepared by Technical Committee ISO/TC 147, *Water quality*, Subcommittee SC 2, *Physical, chemical and biochemical methods*.

Introduction

In recent years, ground water contamination as well as surface water contamination by pesticides has become a matter of public concern. Identification and quantification of pesticides at trace level concentrations often require both high sensitive chromatographic equipment and effective enrichment steps. In the analysis of aqueous samples, sample preparation techniques including solid-phase extraction (SPE) are frequently the most time-consuming steps and in many cases can be effectively replaced by solid-phase microextraction (SPME).

When using this International Standard, it may be necessary in some cases to determine whether and to what extent particular problems could require the specification of additional marginal conditions.

Water quality — Determination of selected plant treatment agents and biocide products — Method using solid-phase microextraction (SPME) followed by gas chromatography-mass spectrometry (GC-MS)

WARNING — Persons using this International Standard should be familiar with normal laboratory practice. This International Standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any national regulatory conditions.

IMPORTANT — It is absolutely essential that tests conducted according to this International Standard be carried out by suitably trained staff.

1 Scope

This International Standard specifies a method for the determination of the dissolved amount of selected plant treatment agents and biocide products in drinking water, ground water and surface water by solid-phase microextraction (SPME) followed by gas chromatography-mass spectrometry (GC-MS). The limit of determination depends on the matrix, on the specific compound to be analysed and on the sensitivity of the mass spectrometer. For most plant treatment agents and biocides to which this International Standard applies, it is at least 0,05 µg/l. Validation data related to a concentration range between 0,05 µg/l and 0,3 µg/l have been demonstrated in an interlaboratory trial.

This method may be applicable to other compounds not explicitly covered by this International Standard or to other types of water. However, it is necessary to verify the applicability of this method for these special cases.

NOTE Determinations by this International Standard are performed on small sample amounts (e.g. sample volumes between 8 ml and 16 ml).

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 3696, *Water for analytical laboratory use — Specification and test methods*

ISO 5667-1, *Water quality — Sampling — Part 1: Guidance on the design of sampling programmes and sampling techniques*

ISO 5667-3, *Water quality — Sampling — Part 3: Guidance on the preservation and handling of water samples*

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