

Water quality - Determination of short-chain polychlorinated alkanes (SCCPs) in sediment, sewage sludge and suspended (particulate) matter - Method using gas chromatography-mass spectrometry (GC-MS) and electron capture negative ionization (ECNI) (ISO 18635:2016)

## EESTI STANDARDI EESSÕNA

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See Eesti standard EVS-EN ISO 18635:2016 sisaldab Euroopa standardi EN ISO 18635:2016 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 18635:2016 consists of the English text of the European standard EN ISO 18635:2016.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
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Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

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English Version

Water quality - Determination of short-chain polychlorinated alkanes (SCCPs) in sediment, sewage sludge and suspended (particulate) matter - Method using gas chromatography-mass spectrometry (GC-MS) and electron capture negative ionization (ECNI) (ISO 18635:2016)

Qualité de l'eau - Détermination des alcanes polychlorés à chaîne courte dans les sédiments et matières en suspension (particules) - Méthode par chromatographie en phase gazeuse-spectrométrie de masse (CPG-SM) et ionisation chimique négative (ICN) (ISO 18635:2016)

Wasserbeschaffenheit - Bestimmung kurzkettiger polychlorierter Alkane (SCCP) in Sediment, Klärschlamm und Schwebstoffen - Gaschromatographisch-massenspektrometrisches Verfahren (GC-MS) unter Anwendung negativer chemischer Ionisation und Elektroneneinfang (ECNI) (ISO 18635:2016)

This European Standard was approved by CEN on 20 February 2016.

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CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

## European foreword

This document (EN ISO 18635:2016) has been prepared by Technical Committee ISO/TC 147 “Water quality” in collaboration with 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of an identical text or by endorsement, at the latest by October 2016, and conflicting national standards shall be withdrawn at the latest by October 2016.

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.

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### Endorsement notice

The text of ISO 18635:2016 has been approved by CEN as EN ISO 18635:2016 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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 147, *Water quality*, Subcommittee SC 2, *Physical, chemical and biochemical methods*.

## Introduction

The user should be aware that particular problems might require the specifications of additional marginal conditions.

# Water quality — Determination of short-chain polychlorinated alkanes (SCCPs) in sediment, sewage sludge and suspended (particulate) matter — Method using gas chromatography-mass spectrometry (GC-MS) and electron capture negative ionization (ECNI)

**WARNING** — Persons using this document should be familiar with normal laboratory practice. This document 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 in accordance with this document be carried out by suitably qualified staff.

## 1 Scope

This International Standard specifies a method for the quantitative determination of the sum of short-chain polychlorinated *n*-alkanes also known as short-chain polychlorinated paraffins (SCCPs) in the carbon bond range, *n*-C<sub>10</sub> to *n*-C<sub>13</sub>, inclusive in mixtures with chlorine mass fractions (“contents”) between 50 % and 67 %, including approximately 6 000 of approximately 8 000 congeners.

This method is applicable to the determination of the sum of SCCPs in sediment and suspended (particulate) matter, sewage sludge, and soil using gas chromatography-mass spectrometry with electron capture negative ionization (GC-ECNI-MS).

Depending on matrix and the detection capabilities of the GC-ECNI-MS, the method can be applied to samples containing, e.g. 0,03 µg/g to 3 µg/g sum of SCCPs.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 5667-12, *Water quality — Sampling — Part 12: Guidance on sampling of bottom sediments*

ISO 5667-13, *Water quality — Sampling — Part 13: Guidance on sampling of sludges*

ISO 5667-17, *Water quality — Sampling — Part 17: Guidance on sampling of bulk suspended solids*

ISO 8466-1, *Water quality — Calibration and evaluation of analytical methods and estimation of performance characteristics — Part 1: Statistical evaluation of the linear calibration function*

ISO 12010, *Water quality — Determination of short-chain polychlorinated alkanes (SCCPs) in water — Method using gas chromatography-mass spectrometry (GC-MS) and negative-ion chemical ionization (NCI)*

ISO/TS 13530, *Water quality — Guidance on analytical quality control for chemical and physicochemical water analysis*

## 3 Principle

Determination of the sum of SCCPs in the carbon bond range, *n*-C<sub>10</sub> to *n*-C<sub>13</sub>, inclusive in technical and environmental transposed mixtures with chlorine mass fractions (“contents”) between 50 % and 67 %