BSI Standards Publication

Soil quality – Risk-based petroleum hydrocarbons

Part 1: Determination of aliphatic and aromatic fractions of volatile petroleum hydrocarbons using gas chromatography (static headspace method)

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National foreword

This British Standard is the UK implementation of EN ISO 16558-1:2015+A1:2020. It is identical to ISO 16558-1:2015, incorporating amendment 1:2020. It supersedes BS EN ISO 16558-1:2015, which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to ISO text carry the number of the ISO amendment. For example, text altered by ISO amendment 1 is indicated by A1 A1.

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 committee manager.

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Compliance with a British Standard cannot confer immunity from legal obligations.

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Date	Text affected
30 June 2020	Implementation of ISO amendment 1:2020 with CEN endorsement A1:2020

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 16558-1:2015 +A1

June 2020

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English Version

Soil quality - Risk-based petroleum hydrocarbons - Part 1: Determination of aliphatic and aromatic fractions of volatile petroleum hydrocarbons using gas chromatography (static headspace method) (ISO 16558-1:2015)

Qualité du sol - Hydrocarbures de pétrole à risque - Partie 1: Détermination des fractions aliphatiques et aromatiques des hydrocarbures de pétrole volatils par chromatographie en phase gazeuse (méthode par espace de tête statique) (ISO 16558-1:2015)

Bodenbeschaffenheit - Mineralölkohlenwasserstoffe für die Risikobeurteilung - Teil 1: Bestimmung aliphatischer und aromatischer Fraktionen leicht flüchtiger Mineralölkohlenwasserstoffe mittels Gaschromatographie (statisches Headspace-Verfahren) (ISO 16558-1:2015)

This European Standard was approved by CEN on 13 June 2015.

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European foreword

This document (EN ISO 16558-1:2015) has been prepared by Technical Committee ISO/TC 190 “Soil quality” in collaboration with 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 March 2016, and conflicting national standards shall be withdrawn at the latest by March 2016.

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Endorsement notice

The text of ISO 16558-1:2015 has been approved by CEN as EN ISO 16558-1:2015 without any modification.

Foreword to amendment A1

This document (EN ISO 16558-1:2015/A1:2020) has been prepared by Technical Committee ISO/TC 190 "Soil quality" in collaboration with Technical Committee CEN/TC 444 “Environmental characterization of solid matrices” the secretariat of which is held by NEN.

This Amendment to the European Standard EN ISO 16558-1:2015 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2020, and conflicting national standards shall be withdrawn at the latest by December 2020.

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Endorsement notice

The text of ISO 16558-1:2015/Amd 1:2020 has been approved by CEN as EN ISO 16558-1:2015/A1:2020 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).

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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 190, *Soil quality*, Subcommittee SC 3, *Chemical methods and soil characteristics*.

ISO 16558 consists of the following parts, under the general title *Soil quality — Risk-based petroleum hydrocarbons*:

— *Part 1: Determination of aliphatic and aromatic fractions of volatile petroleum hydrocarbons using gas chromatography (static headspace method)*

— *Part 2: Determination of aliphatic and aromatic fractions of semi-volatile petroleum hydrocarbons using gas chromatography with flame ionization detection (GC/FID)* [Technical Specification]

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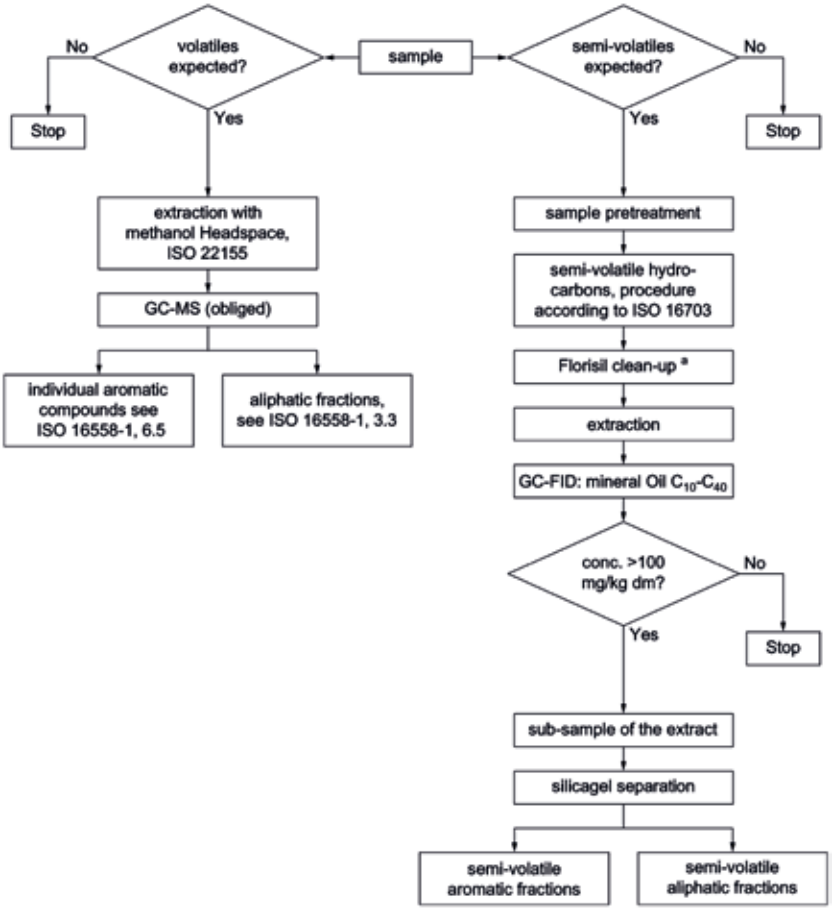
Introduction

ISO 11504 establishes a basis for the choice of fractions and individual compounds when carrying out analysis for petroleum hydrocarbons in soils and soil-like materials including sediments. It provides guidance for the appropriate use of the analytical results in risks assessment. This part of ISO 16558 specifies methods for the quantitative determination of the appropriate fractions of aliphatic and aromatic compounds. The methods described are based on existing standards [mineral oil (ISO 16703) and volatile hydrocarbons (ISO 22155)].

The general use and relation between the two different parts of this International Standard is given in Figure 1.



Key

a Florisil®[b] clean-up: Only to be applied in case the test according to ISO 16703 is carried out. If the aliphatic and aromatic fractions have to be analysed, florisil clean-up should not be carried out. Florisil® is a trade name for a prepared diatomaceous substance mainly consisting of anhydrous magnesium silicate.

b Florisil® is an example of a suitable product available commercially. This information is given for the convenience of users of this International Standard and does not constitute an endorsement by ISO of this product.

Figure 1 — Use of different analytical International Standards during risk assessment of petroleum hydrocarbons

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