

DIN EN 17503



ICS 13.030.01; 13.080.10

Supersedes
DIN EN 15527:2008-09 and
DIN EN 16181:2019-08

**Soil, sludge, treated biowaste and waste –
Determination of polycyclic aromatic hydrocarbons (PAH) by gas
chromatography (GC) and high performance liquid
chromatography (HPLC);
English version EN 17503:2022,
English translation of DIN EN 17503:2022-08**

Boden, Schlamm, behandelter Bioabfall und Abfall –
Bestimmung von polycyclischen aromatischen Kohlenwasserstoffen (PAK) mittels
Gaschromatographie (GC) und Hochleistungs-Flüssigkeitschromatographie (HPLC);
Englische Fassung EN 17503:2022,
Englische Übersetzung von DIN EN 17503:2022-08

Sols, boues, biodéchets traités et déchets –
Dosage des hydrocarbures aromatiques polycycliques (HAP) par chromatographie en phase
gazeuse et chromatographie liquide à haute performance;
Version anglaise EN 17503:2022,
Traduction anglaise de DIN EN 17503:2022-08

Document comprises 57 pages

Translation by DIN-Sprachendienst.

In case of doubt, the German-language original shall be considered authoritative.

A comma is used as the decimal marker.

National foreword

This document (EN 17503:2022) has been prepared by Technical Committee CEN/TC 444 “Environmental characterization of solid matrices” (Secretariat: NEN, Netherlands).

The responsible German body involved in its preparation was *DIN-Normenausschuss Wasserwesen* (DIN Standards Committee Water Practice), Working Group NA 119-01-02-02-05 AK “Organic analysis”.

The DIN documents corresponding to the documents referred to in this document are as follows:

ISO 5725-2	DIN ISO 5725-2
ISO 8466-2	DIN ISO 8466-2
ISO 18287	DIN ISO 18287
ISO 18512	DIN ISO 18512
ISO 28540	DIN ISO 28540

For current information on this document, please go to DIN’s website (www.din.de) and search for the document number in question.

Amendments

This standard differs from DIN EN 15527:2008-09 and DIN EN 16181:2019-08 as follows:

- a) the contents of DIN EN 15527:2008-09 and DIN EN 16181:2019-08 have been combined, thus extending the Scope;
- b) taking into consideration the different matrices, this document does not contain a single possible way of working. Different clean-up and extraction methods are described;
- c) the determination of PAH is described by GC-MS detection as well as by HPLC-DAD-UV/FLD;
- d) the standard has been editorially revised.

Previous editions

DIN EN 15527: 2008-09
DIN CEN/TS 16181 (DIN SPEC 91243): 2013-12
DIN EN 16181: 2019-08

National Annex NA (informative)

Bibliography

DIN ISO 5725-2, *Accuracy (trueness and precision) of measurement methods and results — Part 2: Basic method for the determination of repeatability and reproducibility of a standard measurement method*

DIN ISO 8466-2, *Water quality — Calibration and evaluation of analytical methods and estimation of performance characteristics — Part 2: Calibration strategy for non-linear second-order calibration functions*

DIN ISO 18287, *Soil quality — Determination of polycyclic aromatic hydrocarbons (PAH) — Gas chromatographic method with mass spectrometric detection (GC-MS)*

DIN ISO 18512, *Soil quality — Guidance on long and short term storage of soil samples*

DIN EN ISO 28540, *Water quality — Determination of 16 polycyclic aromatic hydrocarbons (PAH) in water — Method using gas chromatography with mass spectrometric detection (GC-MS)*

— This page is intentionally blank —

English Version

Soil, sludge, treated biowaste and waste -
Determination of polycyclic aromatic hydrocarbons (PAH) by
gas chromatography (GC) and high performance
liquid chromatography (HPLC)

Sols, boues, biodéchets traités et déchets -
Dosage des hydrocarbures aromatiques polycycliques
(HAP) par chromatographie en phase gazeuse et
chromatographie liquide à haute performance

Boden, Schlamm, behandelter Bioabfall und Abfall -
Bestimmung von polycyclischen aromatischen
Kohlenwasserstoffen (PAK) mittels
Gaschromatographie (GC) und Hochleistungs-
Flüssigkeitschromatographie (HPLC)

This European Standard was approved by CEN on 3 January 2022.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents	Page
European foreword	3
Introduction	4
1 Scope.....	5
2 Normative references.....	6
3 Terms and definitions	6
4 Principle	8
5 Interferences	8
6 Safety remarks	9
7 Reagents.....	10
8 Apparatus	14
9 Sample storage and preservation	15
10 Procedure	16
11 Performance characteristics.....	29
12 Precision	29
13 Test report.....	30
Annex A (informative) Repeatability and reproducibility data	31
A.1 Materials used in the interlaboratory comparison study	31
A.2 Interlaboratory comparison results	32
Annex B (informative) Examples of instrumental conditions and chromatograms.....	39
B.1 Measurement of PAH with GC-MS	39
B.2 Measurement of PAH with HPLC fluorescence.....	45
B.3 Example for measurement conditions of PAH with GC-MS/MS.....	51
Bibliography	53