

Methods for analysis of animal feeding stuffs —

Part 22: Determination of residues of organochlorine pesticides — Gas chromatographic method

The European Standard EN ISO 14181:2000 has the status of a
British Standard

ICS 07.100.30; 65.120

National foreword

This British Standard is the official English language version of EN ISO 14181:2000. It is identical with ISO 14181:2000.

The UK participation in its preparation was entrusted to Technical Committee AW/10, Animal feeding stuffs, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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

Cross-references

Attention is drawn to the fact that CEN and CENELEC Standards normally include an annex which lists normative references to international publications with their corresponding European publications. The British Standards which implement these international or European publications may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

This British Standard, having been prepared under the direction of the Consumer Products and Services Sector Committee, was published under the authority of the Standards Committee and comes into effect on 15 May 2001

Summary of pages

This document comprises a front cover, an inside front cover, the EN ISO title page, the EN ISO foreword page, the ISO title page, pages ii to iv, pages 1 to 20, an inside back cover and a back cover.

The BSI copyright date displayed in this document indicates when the document was last issued.

Amendments issued since publication

Amd. No.	Date	Comments

© BSI 05-2001

ISBN 0 580 37279 0

English version

Animal feeding stuffs - Determination of residues of
organochlorine pesticides - Gas chromatographic method (ISO
14181:2000)

Aliments des animaux - Détermination des résidus de
pesticides organochlorés - Méthode par chromatographie
en phase gazeuse (ISO 14181:2000)

Futtermittel - Bestimmung des Gehalts an
Organochlorpestizid-Rückständen -
Gaschromatographisches Verfahren (ISO 14181:2000)

This European Standard was approved by CEN on 15 September 2000.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
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Foreword

The text of the International Standard ISO 14181:2000 has been prepared by Technical Committee ISO/TC 34 "Agricultural food products" in collaboration with Technical Committee CEN/TC 327 "Animal feeding stuffs - Methods of sampling and analysis", 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 2001, and conflicting national standards shall be withdrawn at the latest by March 2001.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

NOTE FROM CEN/CS: The foreword is susceptible to be amended on reception of the German language version. The confirmed or amended foreword, and when appropriate, the normative annex ZA for the references to international publications with their relevant European publications will be circulated with the German version.

Endorsement notice

The text of the International Standard ISO 14181:2000 was approved by CEN as a European Standard without any modification.

INTERNATIONAL STANDARD

EN ISO 14181:2000

ISO
14181

First edition
2000-09-15

Animal feeding stuffs — Determination of residues of organochlorine pesticides — Gas chromatographic method

*Aliments des animaux — Détermination des résidus de pesticides
organochlorés — Méthode par chromatographie en phase gazeuse*



Reference number
ISO 14181:2000(E)

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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 3.

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.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 14181 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 10, *Animal feeding stuffs*.

Annexes A and B of this International Standard are for information only.

Animal feeding stuffs — Determination of residues of organochlorine pesticides — Gas chromatographic method

1 Scope

This International Standard specifies a gas chromatographic method for the determination of residues of organochlorine pesticides in animal feeding stuffs.

The method is applicable to animal feeding stuffs containing residues of one or more of the following organochlorine pesticides and some of their isomers and degradation products: aldrin, *op'*-DDE, *pp'*-DDE, *op'*-DDT, *pp'*-DDT, dieldrin, endosulfan, endrin, HCB, α -HCH (α -BHC), β -HCH (β -BHC), γ -HCH (γ -BHC), δ -HCH (δ -BHC), heptachlor, heptachlor epoxide, *op'*-TDE (*op'*-DDD), *pp'*-TDE (*pp'*-DDD) and methoxychlor.

The lower determination limit for these organochlorine pesticides is 0,005 µg/g. However, the lower determination limit is 0,01 µg/g for *op'*-DDT and *pp'*-DDT, and 0,05 µg/g for methoxychlor.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the normative document indicated below. For undated references, the latest edition of the normative documents referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 3696:1987, *Water for analytical laboratory use — Specification and test methods*.

ISO 6498, *Animal feeding stuffs — Preparation of test samples*.

3 Principle

A test portion is extracted with acetone. The filtered extract is diluted with water and saturated sodium chloride solution. The pesticides are partitioned into dichloromethane. The concentrated extract is purified on a chromatographic column of 10 % water-deactivated silica gel. The pesticide residues are determined by gas chromatography using an electron capture detector or a mass selective detector.

4 Reagents and materials

Use only reagents of recognized analytical grade and with a purity suitable for pesticide residue analysis.

Check the purity of the reagents by performing a blank test under the same conditions as used in the method. The chromatogram should not show any interfering impurity.

WARNING — Some of the organic solvents are suspected carcinogens. Use with care.

4.1 Water, complying with at least grade 3 in accordance with ISO 3696.