INTERNATIONAL STANDARD

ISO 13493

Second edition
2021-08

Meat and meat products — Determination of chloramphenicol content — Reference method

Viande et produits à base de viande — Dosage du chloramphénicol — Méthode de référence

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Reference number
ISO 13493:2021(E)

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Published in Switzerland

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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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 6, *Meat, poultry, fish, eggs and their products*.

This second edition cancels and replaces the first edition (ISO 13493:1998), which has been technically revised. The main changes compared with the previous edition are as follows:

— A new test method, the liquid chromatography tandem mass spectrometry method (LC-MS/MS) has been added. The reference test method has been changed from liquid chromatography to LC-MS/MS.

— The Scope has been expanded to include muscle, casing and the liver of meat and meat products, including livestock, poultry and seafood.

— The title of the document has been modified.

— The document structure has been rearranged.

— The introductory texts for the Foreword, Clause 2 and Clause 3 have been modified.

— Clause 2 has been updated.

— In 7.3.6.1, “Chromatographic conditions”, “detector range”, “recorder ranger” and “paper speed” have been deleted.

— Clause 8 “Test method of liquid chromatography tandem mass spectrometry method (reference method)” has been added.

— The Bibliography has been updated.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Meat and meat products — Determination of chloramphenicol content — Reference method

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1 Scope

This document specifies the liquid chromatographic (LC) method for the determination of chloramphenicol content of muscle tissue of meat, including livestock and poultry.

This document specifies the liquid chromatography tandem mass spectrometry method (LC-MS/MS) for the determination of chloramphenicol content of muscle tissue, casing, liver of meat and meat products, including livestock and poultry.

This document specifies LC-MS/MS as the reference method.

The LC method is suitable for the determination of chloramphenicol content greater than 6,5 mg/kg.

LC-MS/MS is suitable for the determination of chloramphenicol content greater than 0,1 µg/kg.

Test samples which have deteriorated cannot be analysed with this method.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
chloramphenicol content
mass fraction of chloramphenicol residue in meat and meat products

Note 1 to entry: The chloramphenicol content is expressed in micrograms per kilogram.

Note 2 to entry: The chloramphenicol content is determined according to the procedure specified in this document.

4 Principle

4.1 Liquid chromatographic method

A test portion is extracted with water. Filtration and solid-phase extraction are used to isolate the lipophilic components from the aqueous solution. The chloramphenicol is eluted from the cartridge with dichloromethane. The organic phase is evaporated and purified by liquid-liquid extraction with water

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