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**Meat and meat products — Detection  
and determination of colouring agents**

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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)).

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](http://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](http://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 13496:2000), which has been technically revised. The main changes compared with the previous edition are as follows:

- a new test method, high performance liquid chromatography (HPLC), has been added;
- the order of the clauses has been rearranged;
- the title of the document has been modified;
- the Scope has been modified.

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](http://www.iso.org/members.html).

# Meat and meat products — Detection and determination of colouring agents

## 1 Scope

This document specifies a detection method using thin-layer chromatography and a determination method using high performance liquid chromatography (HPLC) for synthetic colouring agents in meat and meat products.

This document specifies the HPLC method as the reference method.

This document is applicable to meat and meat products, including livestock and poultry products.

The method using thin-layer chromatography can detect the following colouring agents:

- |                     |                      |
|---------------------|----------------------|
| — Tartrazine        | — Patent Blue V      |
| — Quinoline Yellow  | — Indigotine         |
| — Sunset Yellow FCF | — Brilliant Black PN |
| — Amaranth          | — Black 7984         |
| — Ponceau 4R        | — Fast Green FCF     |
| — Erythrosine       | — Blue VRS           |

Synonyms and identity numbers of these colouring agents are listed in [Annex A](#). The plant colours and plant extracts which have been observed not to interfere with this method are listed in [B.1](#). Natural colours which in some cases have been shown to interfere with this method are listed in [B.2](#).

The method using HPLC can detect the following colouring agents:

- |                     |                      |
|---------------------|----------------------|
| — Tartrazine        | — Allura Red AC      |
| — Amaranth          | — Brilliant Blue FCF |
| — Ponceau 4R        | — New Red            |
| — Sunset Yellow FCF | — Carmoisine         |
| — Erythrosine       | — Indigotine         |

Chromatograms of these standard reference colours are shown in [Annex D](#).

## 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*

ISO 4793, *Laboratory sintered (fritted) filters — Porosity grading, classification and designation*

AOAC 46.1.08, *Official Methods of Analysis (AOAC International)*