INTERNATIONAL STANDARD

ISO 15302

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Animal and vegetable fats and oils — Determination of benzo[*a*]pyrene content — Reverse-phase high-performance liquid chromatography method

Corps gras d'origines animale et végétale — Détermination de la teneur en benzo[a]pyrène — Méthode par chromatographie liquide à haute performance à polarité de phase inversée

Reference number
ISO 15302:1998(E)

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.

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.

International Standard ISO 15302 was prepared by Technical Committee ISO/TC 34, *Agricultural food products*, Subcommittee SC 11, *Animal and vegetable fats and oils*.

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

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Animal and vegetable fats and oils — Determination of benzo[*a*]pyrene content — Reverse-phase high-performance liquid chromatography method

1 Scope

This International Standard specifies a method for the determination of benzo[*a*]pyrene in crude or refined edible oils and fats by reverse-phase high-performance liquid chromatography (HPLC) using fluorimetric detection in the range from 0,1 µg/kg to 10 µg/kg.

2 Normative reference

The following standard contains provisions, which through reference in this text, constitute provisions of this International Standard. At the time of publication the edition indicated was valid. All standards are subject to revision and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 661:1989, *Animal and vegetable fats and oils — Preparation of test sample*

3 Principle

Adsorption of a suitable amount of sample on an alumina column, followed by elution with light petroleum of any benzo[*a*]pyrene present, and subsequent analysis of the eluate by HPLC using a fluorimetric detector.

4 Reagents

All reagents shall be of recognized analytical grade. Where analytical grade solvents other than the recommended ones are used, a full blank analysis shall be carried out and the results of this blank analysis reported.

4.1 Water, double distilled, filtered through a membrane filter of 0,45 µm pore size; deionized water obtained by purifying demineralized water systems may also be used.

4.2 Light petroleum (boiling point range between 40 °C and 60 °C), or **hexane**, redistilled over potassium hydroxide pellets (4 g/l).

4.3 Acetonitrile, suitable for HPLC.

4.4 Tetrahydrofuran, suitable for HPLC.

4.5 Toluene, suitable for HPLC.

4.6 Sodium sulfate, granular, anhydrous.