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Vegetable fats and oils - Determination of phospholipids in lecithins by high performance liquid chromatography (HPLC) using a light scattering detector (ISO 11701:2009)

Tierische und pflanzliche Fette und Öle - Bestimmung von Phospholipiden in pflanzlichen Lecithinen durch HPLC mittels eines Lichtstredetektors (ISO 11701:2009)

Corps gras d'origine végétale - Détermination des phospholipides dans les lécithines par chromatographie liquide à haute performance (CLHP) utilisant un détecteur à diffusion de la lumière (ISO 11701:2009)

Ta slovenski standard je istoveten z: EN ISO 11701:2009

ICS:

67.200.10 Üæ dā • \ ^ / Å / Ö ã ç \ ^
 { æ [à ^ Å / Å | ðæ Animal and vegetable fats
 and oils

SIST EN ISO 11701:2010 en,fr,de

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EUROPEAN STANDARD

EN ISO 11701

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2009

ICS 67.200.10

English Version

Vegetable fats and oils - Determination of phospholipids content in lecithins by HPLC using a light-scattering detector (ISO 11701:2009)

Corps gras d'origine végétale - Détermination de la teneur en phospholipides dans les lécithines par CLHP avec détecteur à diffusion de la lumière (ISO 11701:2009)

Pflanzliche Fette und Öle - Bestimmung des Gehaltes an Phospholipiden in Lecithinen durch HPLC mittels eines Lichtstreuendetektors (ISO 11701:2009)

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Foreword

This document (EN ISO 11701:2009) has been prepared by Technical Committee ISO/TC 34 "Food products" in collaboration with Technical Committee CEN/TC 307 "Oilseeds, vegetable and animal fats and oils and their by-products - Methods of sampling and analysis" the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by June 2010, and conflicting national standards shall be withdrawn at the latest by June 2010.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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INTERNATIONAL
STANDARD

ISO
11701

First edition
2009-12-15

**Vegetable fats and oils — Determination
of phospholipids content in lecithins by
HPLC using a light-scattering detector**

*Corps gras d'origine végétale — Détermination de la teneur en
phospholipides dans les lécithines par CLHP avec détecteur à diffusion
de la lumière*

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ISO 11701:2009(E)

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ISO 11701:2009(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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 11701 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 11, *Animal and vegetable fats and oils*.

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Vegetable fats and oils — Determination of phospholipids content in lecithins by HPLC using a light-scattering detector

1 Scope

This International Standard specifies a method for the quantitative determination of phospholipids content by high performance liquid chromatography (HPLC) using a diol column and a light-scattering detector.

The method is applicable to crude, oil-containing lecithins, and to oil-free lecithins and lecithin fractions from vegetable fats and oils.

The method is not applicable to animal and ruminant lecithins and enzymatically hydrolysed lecithins as the peak separation of lysophosphatidylethanolamine (LPE), lysophosphatidylinositol (LPI) and lysophosphatidic acid (LPA) is insufficient.

2 Normative references

The following referenced documents are indispensable for the application 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 661, *Animal and vegetable fats and oils — Preparation of test sample*

3 Terms and definitions

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

3.1

content of an individual phospholipid

mass fraction of *N*-acyl-phosphatidylethanolamine (*N*-acyl-PE) or phosphatidylcholine (PC) or phosphatidylethanolamine (PE) or phosphatidylinositol (PI) or phosphatidic acid (PA) or lysophosphatidylcholine (LPC), determined in accordance with the method specified in this International Standard

NOTE The content is expressed in grams per 100 g, numerically equal to a percentage mass fraction.

4 Principle

The individual phospholipids are separated by HPLC using a diol column and a light-scattering detector. For the purpose of quantification, a certified reference mixture is used.