



SLOVENSKI STANDARD SIST EN ISO 29841:2014

01-september-2014

Rastlinske maščobe in olja - Določevanje razgradnih produktov klorofila a in a' (feofitini a, a' in pirofeofitini) (ISO 29841:2009)

Vegetable fats and oils - Determination of the degradation products of chlorophylls a and a' (pheophytins a, a' and pyropheophytins) (ISO 29841:2009)

Pflanzliche Fette und Öle - Bestimmung thermischer Abbauprodukte des Chlorophyll a und a' (Pheophytin a, a' und Pyropheophytin) (ISO 29841:2009)

Corps gras d'origine végétale - Détermination des produits de décomposition des chlorophylles a et a' (phéophytines a, a' et pyrophéophytines) (ISO 29841:2009)

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Ta slovenski standard je istoveten z: **EN ISO 29841:2014**

ICS:

67.200.10	Rastlinske in živalske maščobe in olja	Animal and vegetable fats and oils
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EUROPEAN STANDARD

EN ISO 29841

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2014

ICS 67.200.10

English Version

Vegetable fats and oils - Determination of the degradation products of chlorophylls a and a' (pheophytins a, a' and pyropheophytins) (ISO 29841:2009)

Corps gras d'origine végétale - Détermination des produits de décomposition des chlorophylles a et a' (phéophytines a, a' et pyropheophytines) (ISO 29841:2009)

Pflanzliche Fette und Öle - Bestimmung thermischer Abbauprodukte des Chlorophyll a und a' (Pheophytin a, a' und Pyropheophytin) (ISO 29841:2009)

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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 CEN-CENELEC Management Centre has the same status as the official versions.

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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

The text of ISO 29841:2009 has been prepared by Technical Committee ISO/TC 34 "Food products" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 29841:2014 by 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 October 2014, and conflicting national standards shall be withdrawn at the latest by October 2014.

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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Endorsement notice

The text of ISO 29841:2009 has been approved by CEN as EN ISO 29841:2014 without any modification.

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INTERNATIONAL
STANDARD

ISO
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First edition
2009-03-15

**Vegetable fats and oils — Determination
of the degradation products of
chlorophylls a and a' (pheophytins a, a'
and pyropheophytins)**

*Corps gras d'origine végétale — Détermination des produits de
décomposition des chlorophylles a et a' (phéophytines a, a' et
pyropheophytines)*

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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 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 29841 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 the degradation products of chlorophylls *a* and *a'* (pheophytins *a*, *a'* and pyropheophytins)

1 Scope

This International Standard specifies a procedure for the determination of the degradation products pheophytin *a*, *a'* and pyropheophytin *a* of chlorophylls. The method is applicable to vegetable fats and oils only.

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*

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3 Terms and definitions

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

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3.1

pyropheophytin *a* (content in chlorophyll degradation products)

mass of pyropheophytin *a* divided by the sum of the masses of pheophytin *a*, *a'* and pyropheophytin *a*

4 Principle

Separation of the pigments (chlorophylls, pheophytins *a* and *a'*, pyropheophytin *a*) using a miniaturized column chromatography on a silica gel column from the major part of the lipids (triglycerides). The eluate is analysed by RP18-HPLC, and the separated components are monitored at 410 nm using a photometric detector.

The analysis of some seed oils (e.g. rapeseed oil) requires a higher sensitivity which can be achieved using fluorescence detection with an excitation wavelength of 430 nm and an emission wavelength of 670 nm.

A direct HPLC determination with fluorescence detection is also possible and described in Annex C.

5 Reagents

WARNING — Attention is drawn to the regulations which specify the handling of hazardous substances. Technical, organizational and personal safety measures shall be followed.

During the analysis, unless otherwise stated, use only reagents of recognized analytical grade.