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**Nativni škrob - Določevanje vsebnosti škroba - Polarimetrijska metoda po Ewersu  
(ISO 10520:1997)**

Native starch - Determination of starch content - Ewers polarimetric method (ISO 10520:1997)

Native Stärke - Bestimmung des Stärkegehaltes - Polarimetrisches Verfahren nach Ewers (ISO 10520:1997)

Amidons et fécules natifs - Dosage de l'amidon - Méthode polarimétrique de Ewers (ISO 10520:1997)

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**Ta slovenski standard je istoveten z: EN ISO 10520:1998**

**ICS:**

67.180.20      Škrob in izdelki iz njega      Starch and derived products

**SIST EN ISO 10520:1999**

**en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

EN ISO 10520

September 1998

ICS 67.180

Descriptors: see ISO document

English version

Native starch - Determination of starch content - Ewers  
polarimetric method (ISO 10520:1997)

Amidons et féculés natifs - Dosage de l'amidon - Méthode  
polarimétrique de Ewers (ISO 10520:1997)

Native Stärke - Bestimmung des Stärkegehaltes -  
Polarimetrisches Verfahren nach Ewers (ISO 10520:1997)

This European Standard was approved by CEN on 10 August 1998.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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EN ISO 10520:1998

### Foreword

The text of the International Standard from Technical Committee ISO/TC 93 "Starch (including derivatives and by-products" of the International Organization for Standardization (ISO) has been taken over as an European Standard by CEN/CS.

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 March 1999, and conflicting national standards shall be withdrawn at the latest by March 1999.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

### Endorsement notice

The text of the International Standard ISO 10520:1997 has been approved by CEN as a European Standard without any modification.

NOTE: Normative references to International Standards are listed in annex ZA (normative).

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**Annex ZA** (normative)**Normative references to international publications  
with their relevant European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 1666	1996	Starch - Determination of moisture content - Oven-drying methods	EN ISO 1666	1997
ISO 3696	1987	Water for analytical laboratory use - Specification and test methods	EN ISO 3696	1995

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INTERNATIONAL  
STANDARD

ISO  
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First edition  
1997-09-01

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**Native starch — Determination of starch  
content — Ewers polarimetric method**

*Amidons et féculés natifs — Dosage de l'amidon — Méthode polarimétrique  
de Ewers*

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Reference number  
ISO 10520:1997(E)

**ISO 10520:1997(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 10520 was prepared by Technical Committee ISO/TC 93, *Starch (including derivatives and by-products)*.

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

<https://standards.iteh.ai/catalog/standards/sist/be980a0f-0800-4dfb-b980-7b7e642bf5df/sist-en-iso-10520-1999>

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# Native starch — Determination of starch content — Ewers polarimetric method

## 1 Scope

This International Standard specifies a polarimetric method for the determination of the starch content of native starch, with the exception of starch with high amylose content.

It is not applicable to modified or pregelatinized (water-soluble) starch.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were 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 editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

- ISO 1666:1996, *Starch — Determination of moisture content — Oven-drying method*  
ISO 3696:1987, *Water for analytical laboratory use — Specification and test methods*

## 3 Principle

The method includes two intermediate determination steps.

**3.1** A portion of the sample is hydrolysed with dilute hydrochloric acid and the optical rotation measured polarimetrically after clarification and filtration.

**3.2** A second portion of the sample is treated with 40 % (V/V) ethanol to extract soluble sugars and polysaccharides of lower molecular mass. The filtrate is then subjected to the procedure given in 3.1.

The difference between the measurements 3.1 and 3.2, multiplied by a factor, gives the starch content of the sample.

NOTE — Key parameters of the method are the time and temperature of the hydrolysis, and the correct use and calibration of the polarimeter. Consequently, the method includes constant agitation in the water bath, which should be of a size appropriate to ensure rapid temperature rise and steady temperature conditions.