NISU
Setteindeksi määramine - Zeleny test

Wheat
Determination of sedimentation index - Zeleny test

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

Käesolev Eesti standard EVS-ISO 5529:2003 “Nisu. Setteindeksi määramine - Zeleny test” sisaldab rahvusvahelise standardi ISO 5529:1992 “Wheat - Determination of sedimentation index - Zeleny test” identset ingliskeelset teksti.

Standardi avaldamise korraldas Eesti Standardikeskus.

Standard EVS-ISO 5529:2003 on kinnitatud Eesti Standardikeskuse 30.01.2003 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teataja 2003. aasta veebruarikuu numbris.

Standard on kättesaadav Eesti Standardikeskusest.

NATIONAL FOREWORD

This Estonian Standard EVS-ISO 5529:2003 consists of the identical English text of the International Standard ISO 5529:1992 “Wheat - Determination of sedimentation index - Zeleny test”.

Estonian standard is published by the Estonian Centre for Standardisation.

This standard is ratified with the order of Estonian Centre for Standardisation dated 30.01.2003 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

The standard is available from Estonian Centre for Standardisation.

Käsitlusala

Standard kirjeldab meetodit, mis on tuntud kui "Zeleny settetest", et hinnata üht nisu kvaliteeti määravatest faktoritest sellest valmistatud jahu küpsetusjõu suhtes. Meetod kehtib ainult nisule *Triticum aestivum*.

ICS 67.060 Teravili, kaunvili ja nendest valmistatud tooted

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 5529 was prepared by Technical Committee ISO/TC 34, *Agricultural food products*, Sub-Committee SC 4, *Cereals and pulses*.

This second edition cancels and replaces the first edition (ISO 5529:1978), of which it constitutes a technical revision.

This International Standard is based on Standard No. 116, *Sedimentation test (after Zeleny) to assess the milling value*, and Standard No. 118, *Experimental milling for the sedimentation test (Zeleny)*, of the International Association for Cereal Science and Technology (ICC).

Annex A forms an integral part of this International Standard.

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Wheat — Determination of sedimentation index — Zeleny test

1 Scope

This International Standard specifies a method, known as the "Zeleny sedimentation test", for assessing one of the factors determining the quality of wheat with regard to the baking strength of the flour which can be made from it.

The method is applicable only to *Triticum aestivum* wheat.

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 565:1990, *Test sieves — Metal wire cloth, perforated metal plate and electroformed sheet — Nominal sizes of openings.*

ISO 648:1977, *Laboratory glassware — One-mark pipettes.*

ISO 712:1985, *Cereals and cereal products — Determination of moisture content (Routine reference method).*

ISO 2171:1980, *Cereals, pulses and derived products — Determination of ash.*

3 Definition

For the purposes of this International Standard, the following definition applies.

3.1 sedimentation index: The number indicating the volume, expressed in millilitres, of the sediment obtained under specified conditions from a suspension of test flour, prepared from the wheat, in a lactic acid solution.

4 Principle

Suspension of a test flour, prepared from the wheat under specified grinding and sieving conditions, in a lactic acid solution in the presence of bromophenol blue. After specified shaking and rest times, determination of the volume of the deposit resulting from the sedimentation of the flour particles.

5 Reagents

Use only reagents of recognized analytical grade, unless otherwise specified.

Use distilled water, or water of at least equivalent purity, containing less than 2 mg/kg of mineral matter.

5.1 Sedimentation test reagent

5.1.1 Lactic acid solution

Prepare a concentrated 85 % (V/V) lactic acid solution containing not more than 40 mg/kg of mineral matter.

Dilute 250 ml of this concentrated solution to 1 litre with water. Boil the dilute solution under reflux for 6 h (see note 1).

Titrate an aliquot portion of this solution with potassium hydroxide solution (for 5 ml of the lactic acid solution, about 28 ml of 0,5 mol/l potassium hydroxide solution is necessary). The concentration found shall be between 2,7 mol/l and 2,8 mol/l.

NOTE 1 Concentrated lactic acid contains associated molecules which, on dilution, dissociate slowly to a certain equilibrium. Boiling accelerates this dissolution process, which is essential in order to obtain reproducible sedimentation values.