

TERAVILI JA TERAVALJASAADUSED
Niiskusesisalduse määramine
(Põhiline referentsmeetod)

Cereals and cereal products
Determination of moisture content
(Basic reference method)

EESTI STANDARDI EESSÕNA**NATIONAL FOREWORD**

Käesolev Eesti standard EVS-ISO 711:2004 "Teravili ja teraviljasaadused. Niiskusesisalduse määramine (Põhiline referentsmeetod)" sisaldab rahvusvahelise standardi ISO 711:1985 "Cereals and cereal products - Determination of moisture content (Basic reference method)" identset ingliskeelset teksti.	This Estonian Standard EVS-ISO 711:2004 consists of the identical English text of the International Standard ISO 711:1985 "Cereals and cereal products - Determination of moisture content (Basic reference method)".
Standardi avaldamise korraldas Eesti Standardikeskus.	Estonian standard is published by the Estonian Centre for Standardisation.
Standard EVS-ISO 711:2004 on kinnitatud Eesti Standardikeskuse 19.02.2004 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teataja 2004. aasta märtsikuu numbris.	This standard is ratified with the order of Estonian Centre for Standardisation dated 19.02.2004 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
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Käsitlusala

Standard käsitleb teravilja ja teraviljasaaduste niiskusesisalduse määramise põhilist referentsmeetodit.

Meetod ei ole rakendatav maisile, selleks identne meetod, niinimetatud absoluutmeetod on kirjeldatud ISO 6540 "Maize. Determination of moisture content (on milled grains and on whole grains) lisas".

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ICS 67.060 Teravili, kaunvili ja nendest valmistatud tooted

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Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 711 was prepared by Technical Committee ISO/TC 34, *Agricultural food products*.

This second edition cancels and replaces the first edition (ISO 711-1978), of which it constitutes a minor revision.

NOTE — This International Standard is based on Standard No. 109/1 of the International Association for Cereal Science and Technology (ICC).

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

Cereals and cereal products — Determination of moisture content (Basic reference method)

0 Introduction

The basic reference method specified in this International Standard ensures complete removal of moisture from the product, as has been demonstrated by tests of reversibility and addition of moisture, while avoiding any alteration to its chemical composition, particularly oxidation and loss of volatile organic substances.

1 Scope and field of application

This International Standard specifies the basic reference method for the determination of the moisture content of cereals and cereal products.¹⁾

The method is not applicable to maize, for which an identical method, called the absolute method, is specified in the annex to ISO 6540, *Maize — Determination of moisture content (on milled grains and on whole grains)*.

This basic reference method, which necessitates the employment of special equipment and experienced analysts, is therefore only suitable for use in specialized laboratories, and is intended to serve as a standard for checking and perfecting routine methods for the determination of moisture content (see particularly ISO 712). It is not intended to be used for settling commercial disputes.

2 References

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

ISO 950, *Cereals — Sampling (as grain)*.

3 Definition

moisture content: The loss in mass, expressed as a percentage, undergone by the product under the conditions specified in this International Standard.

4 Principle

If necessary, grinding of a sample, after conditioning, if required. Drying of a test portion under reduced pressure, at a temperature between 45 and 50 °C and in the presence of a desiccant, until constant mass is reached.

5 Apparatus

5.1 Analytical balance.

5.2 Apparatus for reducing pressure to 1,3 to 2,6 kPa,²⁾ for example a water pump.

5.3 Grinding mill, having the following characteristics:

- a) made of material which does not absorb moisture;
- b) easy to clean and having as little dead space as possible;
- c) enabling grinding to be carried out rapidly and uniformly without appreciable development of heat and, as far as possible, without contact with the outside air;
- d) adjustable so as to obtain particles of the dimensions indicated in 7.1.4.

5.4 Metal dish,³⁾ non-corrodible under the test conditions, with a sufficiently tight-fitting lid and having an effective surface area such as to allow the test portion to be distributed in a layer having a mass per unit area of not more than 0,3 g/cm².

5.5 Cup, made from glass or porcelain.

5.6 Drying tube,⁴⁾ of glass, in two parts, one of which, intended to receive the dish (5.4), is closed at one end, while the other, intended to receive the cup (5.5), carries a semi-capillary tube, with a stopcock, for evacuation purposes. The two parts are connected by a ground glass joint.

1) This method has been applied successfully to the following products: wheat, rice (paddy, husked and milled rice), barley, millet, rye and oats, in the form of grains, milled grains, semolina or flour.

2) 1,3 to 2,6 kPa = 13 to 26 mbar = 10 to 20 mmHg.

3) A suitable metal dish is shown, for information only, in figure 1.

4) A suitable drying tube is shown, for information only, in figure 2.