SLOVENSKI STANDARD

SIST ISO 5506

prva izdaja
maj 1995

Sojini proizvodi - Določanje ureazne aktivnosti (prevzet standard ISO 5506:1988 z metodo platnice)

Soya bean products - Determination of urease activity

Produits dérivés du soja - Détermination de l activité uréasique

Deskriptorji: kmetijski proizvodi, prehrambni proizvodi, oljnice, soja, kemijska analiza, določanje vsebnosti, amoniakalni dušik, ureazna aktivnost

ICS 71.040.40

Referenčna številka
SIST ISO 5506:1995 (en)

Nadaljevanje na straneh od II do III in 1 do 2

UVOD

Standard SIST ISO 5506, Sojini proizvodi - Določanje ureazne aktivnosti, prva izdaja, 1995, ima status slovenskega standarda in je z metodo platnice prevzet mednarodni standard ISO 5506, Soya bean products - Determination of urease activity, second edition, 1988-08-15.

PREDGOVOR

Mednarodni standard ISO 5506:1988 je pripravil tehnični odbor Mednarodne organizacije za standardizacijo ISO/TC 34 Kmetijski pridelki in živilski proizvodi.

Odločitev za prevzem tega standarda po metodi platnice je sprejela delovna skupina WG 10 Analitika krme v okviru tehničnega odbora USM/TC KŽP Kmetijski pridelki in živilski proizvodi.

Ta slovenski standard je dne 1995-05-08 odobril direktor USM.

ZVEZA S STANDARDI

S prevzemom tega mednarodnega standarda veljajo naslednje zveze:

SIST ISO 6651:1995 (en)	Krma - Določanje vsebnosti aflatoksina B_1
SIST ISO 6654:1995 (en)	Krma - Določanje vsebnosti sečnine
SIST ISO 6866:1995 (en)	Krma - Določanje vsebnosti prostega in skupnega gosipola
SIST ISO 6870:1995 (en)	Krma - Določanje vsebnosti zearalenona
SIST ISO 5498:1995 (en)	Kmetijski pridelki in živilski proizvodi - Določanje vsebnosti surove vlaknine - Splošna metoda
SIST ISO 5983:1995 (en)	Krma - Določanje vsebnosti dušika in izračun vsebnosti surovih beljakovin
SIST ISO 5984:1995 (en)	Krma - Določanje surovega pepela
SIST ISO 5985:1995 (en)	Krma - Določanje pepela, netopnega v klorovodikovi kislini
SIST ISO 6490-1:1995 (en)	Krma - Določanje vsebnosti kalcija - 1. del: Titrimetrična metoda
SIST ISO 6490-2:1995 (en)	Krma - Določanje vsebnosti kalcija - 2. del: Metoda atomske absorpcijske spektrometrije
SIST ISO 6491:1995 (en)	Krma - Določanje vsebnosti skupnega fosforja - Spektrofotometrična metoda
SIST ISO 6495:1995 (en)	Krma - Določanje vsebnosti v vodi topnih kloridov
SIST ISO 6496:1995 (en)	Krma - Določanje vsebnosti vlage
SIST ISO 6541:1995 (en)	Kmetijski pridelki in živilski proizvodi - Določanje vsebnosti surove vlaknine - Modificirana Scharrerjeva metoda

OSNOVA ZA IZDAJO STANDARDA

- Prevzem standarda ISO 5506:1988

OPOMBI

- Povsod, kjer se v besedilu standarda uporablja izraz mednarodni standard , to pomeni v SIST ISO 5506:1995 slovenski standard .
- Uvod in predgovor nista sestavni del standarda.

Po mnenju Ministrstva za informiranje Republike Slovenije z dne 18. februarja 1992, štev. 23/96-92, spada ta publikacija med proizvode informativne narave iz 13. točke tarifne številke 3, za katere se plačuje 5-odstotni prometni davek.

INTERNATIONAL STANDARD

ISO
5506

Second edition
1988-08-15

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
ORGANISATION INTERNATIONALE DE NORMALISATION
МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Soya bean products — Determination of urease activity

Produits dérivés du soja — Détermination de l'activité uréasique

Reference number
ISO 5506 : 1988 (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 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 5506 was prepared by Technical Committee ISO/TC 34, *Agricultural food products.*

This second edition cancels and replaces the first edition (ISO 5506 : 1978), of which it constitutes a minor revision.

Printed in Switzerland

Introduction

The method specified in this International Standard is based on the property of soya bean products of being able to liberate ammoniacal nitrogen from a urea solution when they have not been sufficiently cooked.

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Soya bean products — Determination of urease activity

1 Scope

This International Standard specifies a method of determining the urease activity of products derived from soya beans. The method allows inadequate cooking of these products to be detected.

It applies to products having a urease activity of less than 1 mg of nitrogen per gram of product as received, under the conditions specified. For more active products, the method applies provided that the mass of the test portion is reduced (see note 1 to 9.1).

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 listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 771 : 1977, *Oilseed residues — Determination of moisture and volatile matter content.*

ISO 5502 : 1983, *Oilseed residues — Preparation of test samples.*

ISO 5505 : 1986, *Oilseed residues — Sampling.*

3 Definition

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

urease activity: Amount of ammoniacal nitrogen liberated per minute under the operating conditions specified in this International Standard, expressed as milligrams of nitrogen per gram of the product as received.

4 Principle

Mixing of a ground test portion with a buffered urea solution. After keeping the mixture for 30 min at 30 °C, neutralization of the ammonia liberated, with an excess of hydrochloric acid solution, and back-titration with standard volumetric sodium hydroxide solution.

5 Reagents

All the reagents shall be of analytical quality and the water used shall be distilled water or water of equivalent purity.

5.1 Urea, buffer solution (pH 6,9 to 7,0).

Prepare a buffer solution by dissolving 4,45 g of disodium hydrogen phosphate dihydrate ($Na_2HPO_4 \cdot 2H_2O$) and 3,40 g of potassium dihydrogen phosphate (KH_2PO_4) in water and making up to 1 000 ml.

Dissolve 30 g of urea (NH_2CONH_2) in the buffer solution. The solution thus prepared has a storage life of 1 month.

5.2 Hydrochloric acid, 0,1 mol/l solution.

5.3 Sodium hydroxide, standard volumetric solution, c(NaOH) = 0,1 mol/l.

6 Apparatus

Usual laboratory apparatus and, in particular, the following.

6.1 Sieve, of 200 µm aperture size.

6.2 Apparatus for potentiometric titration[1], or **pH meter**, sensitive to the nearest 0,02 pH unit, with an **automatic burette** and **magnetic stirrer**.

6.3 Titration flask.

6.4 Thermostatically controlled water-bath, capable of being controlled at 30 °C ± 0,5 °C.

6.5 Test tubes, 18 mm in diameter and 150 mm in length, fitted with a ground-in stopper.

6.6 Pipettes, of 10 ml capacity.

6.7 Grinding device, capable of grinding without significant heating (for example a ball mill).

1) An automatic titration apparatus allows more reproducible results to be obtained.