SLOVENSKI STANDARD
SIST EN ISO 17180:2013

01-junij-2013

Živalska krma - Določevanje lizina, metionina in treonina v komercialnih aminokislinskih izdelkih in premiksih (ISO 17180:2013)

Animal feeding stuffs - Determination of lysine, methionine and threonine in commercial amino acid products and premixtures (ISO 17180:2013)

Futtermittel - Bestimmung von Lysin, Methionin und Threonin in handelsüblichen aminosäurehaltigen Produkten und Vormischungen (ISO 17180:2013)

Aliments des animaux - Détermination de la teneur en lysine, méthionine et thréonine dans les acides aminés industriels et les prémix (ISO 17180:2013)

Ta slovenski standard je istoveten z: **EN ISO 17180:2013**

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65.120	Krmila	Animal feeding stuffs

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EUROPEAN STANDARD

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English Version

Animal feeding stuffs - Determination of lysine, methionine and threonine in commercial amino acid products and premixtures (ISO 17180:2013)

Aliments des animaux - Détermination de la teneur en lysine, méthionine et thréonine dans les acides aminés industriels et les pré-mélanges (ISO 17180:2013)

Futtermittel - Bestimmung von Lysin, Methionin und Threonin in handelsüblichen aminosäurehaltigen Produkten und Vormischungen (ISO 17180:2013)

This European Standard was approved by CEN on 21 March 2013.

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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN ISO 17180:2013) has been prepared by Technical Committee ISO/TC 34 "Food products" in collaboration with Technical Committee CEN/TC 327 “Animal feeding stuffs - Methods of sampling and analysis” the secretariat of which is held by NEN.

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of an identical text or by endorsement, at the latest by October 2013, and conflicting national standards shall be withdrawn at the latest by October 2013.

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The text of ISO 17180:2013 has been approved by CEN as EN ISO 17180:2013 without any modification.

INTERNATIONAL STANDARD

ISO 17180

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Animal feeding stuffs — Determination of lysine, methionine and threonine in commercial amino acid products and premixtures

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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.

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ISO 17180 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 10, *Animal feeding stuffs*.

Animal feeding stuffs — Determination of lysine, methionine and threonine in commercial amino acid products and premixtures

WARNING — This document can involve the use of hazardous materials, operations, and equipment. This document does not purport to address all the safety risks associated with its use. It is the responsibility of the user of this document to establish appropriate safety and healthy practices and determine the applicability of local regulatory limitations prior to use.

1 Scope

This International Standard specifies a method for the quantitative determination of free (non-protein-bound) lysine, methionine, and threonine in commercial products and premixtures containing more than about 10 % mass fraction of the respective amino acid. It does not distinguish between D- and L-forms.

NOTE For the purposes of this International Standard, the term "amino acids" used in Clause 2 onwards refers to lysine, methionine, and threonine.

2 Principle

The samples are treated in dilute hydrochloric acid and then diluted with sodium citrate buffer. Norleucine internal standard is added and the amino acids are separated by an amino acid analyser or high performance liquid chromatography (HPLC), using a cation exchange resin and sodium citrate buffer eluent solutions. The amino acids are measured colourimetrically following post-column reaction with ninhydrin reagent or by fluorescence detection after post-column reaction with *ortho*-phthaldialdehyde (OPA).

3 Reagents and materials

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

3.1 Water, double distilled water or equivalent purity (conductivity <10 µS/cm).

3.2 Standard substances.

3.2.1 Lysine·HCl crystals, purity superior to 99 % mass fraction dried under vacuum in a desiccator for 2 days over P_2O_5 prior to use.

3.2.2 Threonine crystals, purity superior to 99 % mass fraction dried under vacuum in a desiccator for 2 days over P_2O_5 prior to use.

3.2.3 Methionine crystals, purity superior to 99 % mass fraction dried under vacuum in a desiccator for 2 days over P_2O_5 prior to use.

3.3 Norleucine crystals, for use as internal standard, purity superior to 99 % dried under vacuum in a desiccator for 2 days over P_2O_5 prior to use.

3.4 Sodium hydroxide solution, $c(NaOH)$ = 7,5 mol/l, for pH adjustment of sodium citrate buffer.

Carefully dissolve 300 g sodium hydroxide in water (3.1) and make up to 1 l.

