



# SLOVENSKI STANDARD

## SIST-TS CEN ISO/TS 17764-1:2007

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Animal feeding stuffs - Determination of the content of fatty acids - Part 1: Preparation of methyl esters (ISO/TS 17764-1:2002)

Futtermittel - Bestimmung des Gehaltes an Fettsäuren - Teil 1: Vorbereitung von Methylestern (ISO/TS 17764-1:2002)

Aliments des animaux - Détermination de la teneur en acides gras - Partie 1: Préparation des esters méthyliques (ISO/TS 17764-1:2002)

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Ta slovenski standard je istoveten z: CEN ISO/TS 17764-1:2006

### ICS:

65.120

Krmila

Animal feeding stuffs

**SIST-TS CEN ISO/TS 17764-1:2007**

**en**

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English Version

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This Technical Specification (CEN/TS) was approved by CEN on 13 February 2006 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

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

**Management Centre: rue de Stassart, 36 B-1050 Brussels**

## **Foreword**

This document (CEN ISO/TS 17764-1:2006) has been prepared by Technical Committee CEN/TC 327 "Animal feeding stuffs - Methods of sampling and analysis", the secretariat of which is held by NEN, in collaboration with Technical Committee ISO/TC 34 "Agricultural food products".

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this CEN Technical Specification: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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**Animal feeding stuffs — Determination of  
the content of fatty acids —**

**Part 1:  
Preparation of methyl esters**

*Aliments des animaux — Détermination de la teneur en acides gras —  
Partie 1: Préparation des esters méthyliques*  
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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.

In other circumstances, particularly when there is an urgent market requirement for such documents, a technical committee may decide to publish other types of normative document:

- an ISO Publicly Available Specification (ISO/PAS) represents an agreement between technical experts in an ISO working group and is accepted for publication if it is approved by more than 50 % of the members of the parent committee casting a vote;
- an ISO Technical Specification (ISO/TS) represents an agreement between the members of a technical committee and is accepted for publication if it is approved by 2/3 of the members of the committee casting a vote.

An ISO/PAS or ISO/TS is reviewed after three years in order to decide whether it will be confirmed for a further three years, revised to become an International Standard, or withdrawn. If the ISO/PAS or ISO/TS is confirmed, it is reviewed again after a further three years, at which time it must either be transformed into an International Standard or be withdrawn.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/TS 17764-1 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 10, *Animal feeding stuffs*.

ISO/TS 17764 consists of the following parts, under the general title *Animal feeding stuffs — Determination of the content of fatty acids*:

- *Part 1: Preparation of methyl esters*
- *Part 2: Gas chromatographic method*

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# Animal feeding stuffs — Determination of the content of fatty acids —

## Part 1: Preparation of methyl esters

### 1 Scope

ISO/TS 17764 specifies methods for the quantitative determination of individual fatty acids and of the sum of the fatty acids (elutable fatty acids).

This part of ISO/TS 17764 specifies two methods for preparing the methyl esters of fatty acids of animal and vegetable fats, oils and fatty acid mixtures for raw materials for compound animal feeds, and fatty acids originating from fat extracts of animal feeding stuffs, including fats and fatty acid mixtures containing butyric acid.

The general method, the boron trifluoride ( $\text{BF}_3$ ) method, is concerned with the preparation of methyl esters of fatty acids with six or more C atoms, originating from fats, oils and free fatty acids.

The KOH/HCl method is concerned with the preparation of methyl esters of fatty acids with four or more C atoms. This method can also be used for the quantitative determination of fatty acids with a chain length shorter than ten C atoms in free fatty acid mixtures.

The methyl esters produced can be used for gas-liquid chromatography (GLC).

NOTE 1 Unsaponifiable materials are not removed and can, when present in considerable amounts, interfere with the chromatographic analysis.

NOTE 2 ISO/TS 17764-2 describes the application of gas chromatography with capillary columns and flame ionization detection for the determination of the content of fatty acids in a fat by making use of the methyl esters of the fatty acids obtained in accordance with the methods specified in this part of ISO/TS 17764.

### 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 661:1989, *Animal and vegetable fats and oils — Preparation of test sample*

ISO 3696:1987, *Water for analytical laboratory use — Specification and test methods*

ISO 6492:1999, *Animal feeding stuffs — Determination of fat content*