

**Loomsed ja taimsed rasvad ja õlid.
Rasvhapete metüülestrite
gaasikromatograafiline analüüs**

Animal and vegetable fats and oils - Analysis by gas chromatography of methyl esters of fatty acids

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 5508:2000 sisaldab Euroopa standardi EN ISO 5508:1995 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 18.08.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 5508:2000 consists of the English text of the European standard EN ISO 5508:1995.</p> <p>This document is endorsed on 18.08.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: See rahvusvaheline standard annab üldised juhised täidis- või kapillaarkolonnidega gaasikromatograafide kasutamiseks rasvhapete metüülestrite segude kvalitatiivseks ja kvantitatiivseks määramiseks, arvestades vastavat meetodit, mis on esitatud ISO 5509-s. Meetodit ei saa rakendada polümeeritud rasvhapete puhul.</p>	<p>Scope:</p>
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ICS 67.200.10

Võtmesõnad: gaasifaasikromatograafia, loomsed rasvad, loomsed õlid, metüülestrid, põllumajandussaadused, rasvad, rasvhapped, taimeraskvad, taimeõlid, õlid

ICS 67.200.10

Descriptors: Fats, oils, gas chromatography, methyl esters, fatty acids, testing.

English version

Animal and vegetable fats and oils

Analysis by gas chromatography of methyl esters of fatty acids
(ISO 5508:1990)

Corps gras d'origines animale et végétale; analyse par chromatographie en phase gazeuse des esters méthyliques d'acides gras (ISO 5508:1990)

Tierische und pflanzliche Fette und Öle; gaschromatographische Untersuchung der Methylester von Fettsäuren (ISO 5508:1990)

This European Standard was approved by CEN on 1995-01-05 and is identical to the ISO Standard as referred to.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Foreword

International Standard

ISO 5508:1990 Animal and vegetable fats and oils; analysis by gas chromatography of methyl esters of fatty acids, which was prepared by ISO/TC 34 'Agricultural food products' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 307 'Oilseeds, vegetable and animal fats and oils and their by-products; methods of sampling and analysis' as a European Standard.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by October 1995 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard:

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of the International Standard ISO 5508:1990 was approved by CEN as a European Standard without any modification.

1 Scope

This International Standard gives general guidance for the application of gas chromatography, using packed or capillary columns, to determine the qualitative and quantitative composition of a mixture of fatty acid methyl esters obtained in accordance with the method specified in ISO 5509.

The method is not applicable to polymerized fatty acids.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was 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 edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 5509:1978, *Animal and vegetable fats and oils — Preparation of methyl esters of fatty acids*.

3 Reagents

3.1 Carrier gas

Inert gas (nitrogen, helium, argon, hydrogen, etc.), thoroughly dried and with an oxygen content of less than 10 mg/kg.

NOTE 1 Hydrogen, which is used as a carrier gas only with capillary columns, can double the speed of analysis but is hazardous. Safety devices are available.

3.2 Auxiliary gases

3.2.1 Hydrogen (purity $\geq 99,9\%$), free from organic impurities.

3.2.2 Air or oxygen, free from organic impurities.

3.3 Reference standard

A mixture of methyl esters of pure fatty acids, or the methyl esters of a fat of known composition, preferably similar to that of the fatty matter to be analysed.

Care shall be taken to prevent the oxidation of polyunsaturated fatty acids.

4 Apparatus

The instructions given relate to the usual equipment used for gas chromatography, employing packed and/or capillary columns and a flame-ionization detector. Any apparatus giving the efficiency and resolution specified in 5.1.2 is suitable.

4.1 Gas chromatograph.

The gas chromatograph shall comprise the following elements.

4.1.1 Injection system.

Use an injection system either

- a) with packed columns, having the least dead-space possible (in this case the injection system shall be capable of being heated to a temperature 20 °C to 50 °C higher than that of the column), or
- b) with capillary columns, in which case the injection system shall be specially designed for use with such columns. It may be of the split type or it may be of the splitless on column injector type.

NOTE 2 In the absence of fatty acids with less than 16 carbon atoms, a moving needle injector may be used.