

**Toiduained. Raskemetallide määramine.
Elavhõbeda määramine rõhu all
mineraliseerimisega aatom-
absorptsiooni külma auru meetodil
(CVAAC).**

Foodstuffs - determination of trace elements -
Determination of mercury by cold-vapour atomic
absorption spectrometry (CVAAS) after pressure
digestion

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

| | |
|--|---|
| <p>Käesolev Eesti standard EVS-EN 13806:2002 sisaldab Euroopa standardi EN 13806:2002 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 18.10.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p> | <p>This Estonian standard EVS-EN 13806:2002 consists of the English text of the European standard EN 13806:2002.</p> <p>This document is endorsed on 18.10.2002 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> |
|--|---|

| | |
|--|--|
| <p>Käsitlusala: This European Standard specifies a method for the determination of mercury in foodstuffs by cold vapour atomic absorption spectrometry (CVAAS) after pressure digestion</p> | <p>Scope: This European Standard specifies a method for the determination of mercury in foodstuffs by cold vapour atomic absorption spectrometry (CVAAS) after pressure digestion</p> |
|--|--|

ICS 67.050

Võtmesõnad: analysis, atomic abso, chemical analysis, chemical analysis and testin, food pro, food technology, food testing, heavy metals, investigations, mathematical calculations, mercury, metals, methods of analysis, residues, testing, trace element analysis, trace elements

English version

**Foodstuffs - Determination of trace elements - Determination of
mercury by cold-vapour atomic absorption spectrometry
(CVAAS) after pressure digestion**

Produits alimentaires - Dosage des éléments-traces -
Dosage du mercure par spectrométrie d'absorption
atomique par génération de vapeurs froides après digestion
sous pression

Lebensmittel - Bestimmung von Elementspuren -
Bestimmung von Quecksilber mit
Atomabsorptionsspektrometrie (AAS)-Kaldampftechnik
nach Druckaufschluss

This European Standard was approved by CEN on 29 May 2002.

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 Management Centre 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 Management Centre has the same status as the official versions.

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



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

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

Contents

| | page |
|--|------|
| Foreword..... | 3 |
| 1 Scope | 3 |
| 2 Normative references | 3 |
| 3 Principle | 3 |
| 4 Reagents | 4 |
| 5 Apparatus and equipment..... | 5 |
| 6 Procedure | 5 |
| 7 Calculation..... | 6 |
| 8 Limit of quantification | 6 |
| 9 Precision | 7 |
| 10 Test report | 8 |
| Annex A (informative) Results of the interlaboratory tests | 9 |
| Bibliography | 11 |

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 275 "Food analysis - Horizontal methods", the secretariat of which is held by DIN.

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 February 2003, and conflicting national standards shall be withdrawn at the latest by February 2003.

Annex A is informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard specifies a method for the determination of mercury in foodstuffs by cold-vapour atomic absorption spectrometry (CVAAS) after pressure digestion.

Specific foodstuffs for which European Standards exist are excluded from the scope of this horizontal European Standard. It is the task of the analyst to review if vertical standards exist.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 13804, *Foodstuffs — Determination of trace elements — Performance criteria, general considerations and sample preparation*.

EN 13805, *Foodstuffs — Determination of trace elements — Pressure digestion*.

3 Principle

Determination of mercury in the test solution by cold-vapour atomic absorption spectrometry (CVAAS) after pressure digestion according to EN 13805.

The test solution is transferred to the reaction vessel of the mercury analysis unit, and the mercury is reduced with divalent tin or sodium borohydride and flushed into the cuvette of the AAS instrument using a carrier gas stream. The absorption at 253,7 nm (mercury line) is used as a measure of the mercury concentration in the cuvette. If the amounts of mercury in the test solution are very small, it is advisable to enrich the mercury expelled on a gold/platinum gauze (amalgam technique) prior to determination in the cuvette.