

Foodstuffs - Determination of trace elements - Part 2:  
Determination of total mercury in foodstuffs by atomic  
fluorescence spectrometry (AFS) - Cold vapour  
technique after pressure digestion

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

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EUROPEAN STANDARD

EN 13806-2

NORME EUROPÉENNE

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Supersedes EN 13806:2002

English Version

**Foodstuffs - Determination of trace elements - Part 2:  
Determination of total mercury in foodstuffs by atomic  
fluorescence spectrometry (AFS) - cold vapour technique  
after pressure digestion**

Produits alimentaires - Dosage des éléments-traces -  
Partie 2 : Dosage du mercure total dans les produits  
alimentaires par spectrométrie de fluorescence  
atomique (SFA) - Génération de vapeurs froides après  
digestion sous pression

Lebensmittel - Bestimmung von Elementspuren - Teil  
2: Bestimmung des Gesamtquecksilbers in  
Lebensmitteln mittels Atomfluoreszenzspektrometrie  
(AFS) - Kaltdampftechnik nach Druckaufschluss

This European Standard was approved by CEN on 21 February 2025.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

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## European foreword

This document (EN 13806-2:2025) 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 September 2025, and conflicting national standards shall be withdrawn at the latest by September 2025.

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

This document supersedes EN 13806:2002.

The main changes compared to the previous edition are listed below:

- the document has been split up into three separate parts: EN 13806-1 covering the AAS-cold-vapour technique, EN 13806-2 the AFS-cold-vapour technique and EN 13806-3 the solid sample AAS technique;
- full technical revision to bring the technical realization up to date with the latest technology;
- Stabilization of the digest solution;
- Update of statistical data by new interlaboratory study.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

## Introduction

This document has been developed in parallel with EN 13806-1 [3] and EN 13806-3 [4]. All three methods were validated in parallel in interlaboratory studies with the same scope. They are statistically compatible in performances. This allows the users of these documents to employ the most appropriate/available method depending on the purpose of their studies. The statistical parameters of these standards are presented in the respective documents.

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## 1 Scope

This document specifies a method for the determination of total mercury in foodstuffs by cold vapour atomic fluorescence spectrometry (AFS) after pressure digestion.

This method was tested in an interlaboratory study carried out in connection with the pressure digestion method EN 13805 on seven different materials with a mercury concentration in the range from 0,006 mg/kg to 5,38 mg/kg and successfully validated in this range.

The following foodstuffs were analysed:

- Saithe (dried);
- Celery (dried);
- Wheat noodle powder;
- Wild mushrooms (dried);
- Pig liver (dried);
- Cacao powder;
- Tuna fish (dried).

The lower limit of the method's applicability varies depending on the food matrix and the water content of the foodstuff. It is a laboratory-specific value and is defined by the laboratory when calculating the limit of quantification (see 9.2).

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

EN 13804, *Foodstuffs - Determination of elements and their chemical species - General considerations and specific requirements*

EN 13805, *Foodstuffs - Determination of trace elements - Pressure digestion*

## 3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>