



BSI Standards Publication

Foodstuffs — Determination of trace elements

Part 2: Determination of total mercury in foodstuffs by atomic fluorescence spectrometry (AFS) — cold vapour technique after pressure digestion

National foreword

This British Standard is the UK implementation of EN 13806-2:2025. Together with BS EN 13806-1:2025 and BS EN 13806-3:2025, it supersedes BS EN 13806:2002, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee AW/275, Food analysis - Horizontal methods.

A list of organizations represented on this committee can be obtained on request to its committee manager.

Contractual and legal considerations

This publication has been prepared in good faith, however no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability is or will be accepted by BSI in relation to the adequacy, accuracy, completeness or reasonableness of this publication. All and any such responsibility and liability is expressly disclaimed to the full extent permitted by the law.

This publication is provided as is, and is to be used at the recipient's own risk.

The recipient is advised to consider seeking professional guidance with respect to its use of this publication.

This publication is not intended to constitute a contract. Users are responsible for its correct application.

© The British Standards Institution 2025
Published by BSI Standards Limited 2025

ISBN 978 0 539 26715 0

ICS 67.050

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 April 2025.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

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 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.

CEN members are the national standards bodies of 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 United Kingdom.



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

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

Contents

Page

European foreword.....	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	5
4 Principle	6
5 Reagents	6
6 Apparatus.....	9
7 Sampling.....	10
8 Procedure.....	10
8.1 Digestion, removal of nitrous gases and stabilization.....	10
8.2 Cold vapour atomic fluorescence spectrometry	11
8.2.1 Spectrometer settings	11
8.2.2 Cold vapour AFS determination.....	11
8.3 Quality control	11
9 Evaluation	11
9.1 Calculation	11
9.2 Limit of quantification.....	12
9.3 Precision.....	13
9.4 Reproducibility	13
9.5 Trueness.....	13
10 Test report.....	13
Annex A (informative) Precision data	14
Bibliography.....	16

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 will supersede 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.