

**Water quality - Determination of mercury -
Method using atomic fluorescence
spectrometry**

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Method using atomic fluorescence spectrometry

EESTI STANDARDI EESSÕNA**NATIONAL FOREWORD**

<p>Käesolev Eesti standard EVS-EN ISO 17852:2008 sisaldab Euroopa standardi EN ISO 17852:2008 ingliskeelset teksti.</p> <p>Standard on kinnitatud Eesti Standardikeskuse 27.02.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 09.01.2008.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 17852:2008 consists of the English text of the European standard EN ISO 17852:2008.</p> <p>This standard is ratified with the order of Estonian Centre for Standardisation dated 27.02.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p> <p>Date of Availability of the European standard text 09.01.2008.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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English Version

Water quality - Determination of mercury - Method using atomic
fluorescence spectrometry (ISO 17852:2006)

Qualité de l'eau - Dosage du mercure - Méthode par
spectrométrie de fluorescence atomique (ISO 17852:2006)

Wasserbeschaffenheit - Bestimmung von Quecksilber -
Verfahren mittels Atomfluoreszenzspektrometrie (ISO
17852:2006)

This European Standard was approved by CEN on 8 December 2007.

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Foreword

The text of ISO 17852:2006 has been prepared by Technical Committee ISO/TC 147 "Water quality" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 17852:2008 by Technical Committee CEN/TC 230 "Water analysis", 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of an identical text or by endorsement, at the latest by July 2008, and conflicting national standards shall be withdrawn at the latest by July 2008.

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

This document supersedes EN 13506:2001.

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Endorsement notice

The text of ISO 17852:2006 has been approved by CEN as EN ISO 17852:2008 without any modifications.

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Introduction

In natural water sources, mercury compounds generally occur in very small concentrations of less than 0,1 µg/l. Higher concentrations may be found, for example, in industrial waste water.

Both inorganic and organic compounds of mercury may be present. Mercury can also accumulate in sediment and sludge.

In order to fully decompose all of the mercury compounds, a digestion procedure is necessary. Digestion can be omitted only if it is certain that the mercury concentration can be measured without this pre-treatment.

The user should be aware that particular problems could require the specification of additional marginal conditions.

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WARNING — Persons using this International Standard should be familiar with normal laboratory practice. This standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user to establish appropriate safety and health practices and to ensure compliance with any national regulatory conditions.

IMPORTANT — It is absolutely essential that tests conducted according to this International Standard are carried out by suitably qualified staff.

1 Scope

This International Standard specifies a method for the determination of mercury in drinking, surface, ground and rain water using atomic fluorescence spectrometry.

NOTE This International Standard may be applied to industrial and municipal waste water after an additional digestion step under appropriate conditions.

The potential linear dynamic range is approximately 1 ng/l to 100 µg/l. In practice, the working range is often from 10 ng/l to 10 µg/l.

Samples containing mercury at concentrations higher than the working range can be analysed following appropriate dilution of the sample.

The method detection limit (x_{DL}) will be dependent on the selected operating conditions and calibration range. With high purity reagents, a x_{DL} of less than 1 ng/l is obtainable.

The relative standard deviation is typically less than 5 % for concentrations greater than twenty times the method detection limit.

The sensitivity of this method is dependent on the selected operating conditions.

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

ISO 5667-1, *Water quality — Sampling — Part 1: Guidance on the design of sampling programmes and sampling techniques*

ISO 5667-2, *Water quality — Sampling — Part 2: Guidance on sampling techniques*

ISO 5667-3, *Water quality — Sampling — Part 3: Guidance on the preservation and handling of water samples*