

**Välisõhu kvaliteet. Standardmeetod summaarse
gaasilise elavhõbeda määramiseks**

Ambient air quality - Standard method for the determination
of total gaseous mercury

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

**Ambient air quality - Standard method for the determination of
total gaseous mercury**

Qualité de l'air ambiant - Méthode normalisée pour la
détermination du mercure gazeux total

Außenluftbeschaffenheit - Standardisiertes Verfahren zur
Bestimmung des gesamten gasförmigen Quecksilbers

This European Standard was approved by CEN on 5 May 2010.

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Foreword

This document (EN 15852:2010) has been prepared by Technical Committee CEN/TC 264 "Air quality", 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of an identical text or by endorsement, at the latest by December 2010, and conflicting national standards shall be withdrawn at the latest by December 2010.

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1 Scope

This European Standard specifies a standard method for determining total gaseous mercury (TGM) in ambient air using cold vapour atomic absorption spectrometry (CVAAS), or cold vapour atomic fluorescence spectrometry (CVAFS).

This European Standard is applicable to background sites that are in accordance with the requirements of Directive 2004/107/EC and to urban and industrial sites.

The performance characteristics of the method have been determined in comparative field validation tests carried out at four European locations: two background and two industrial sites. The method was tested for two months at each site over a period of twelve months using automated equipment currently used in Europe for determination of TGM in ambient air.

The working range of the method covers the range of ambient air concentrations from those found at background sites, typically less than 2 ng/m^3 , up to those found at industrial sites where higher concentrations are expected. A maximum daily average up to 300 ng/m^3 was measured during the field trials.

Results are reported as the average mass of TGM per volume of air at 293,15 K and 101,325 kPa, measured over a specified time period, in nanograms per cubic metre.

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.

ENV 13005, *Guide to the expression of uncertainty in measurement*

CR 14377, *Air quality — Approach to uncertainty estimation for ambient air reference measurement methods*

EN ISO 20988, *Air quality — Guidelines for estimating measurement uncertainty (ISO 20988:2007)*

ISO 5725-2:1994, *Accuracy (trueness and precision) of measurement methods and results — Part 2: Basic method for the determination of the trueness of a standard measurement method*

ISO 8573-1:2010, *Compressed air — Part 1: Contaminants and purity classes*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

ambient air

outdoor air in the troposphere, excluding workplace air

3.2

calibration

operation that, under specified conditions, in a first step, establishes a relation between the quantity values with measurement uncertainties provided by measurement standards and corresponding indications with associated measurement uncertainties and, in a second step, uses this information to establish a relation for obtaining a measurement result from an indication