

**Air quality - Stationary source
emissions - Determination of total
mercury: Automated measuring
systems**

Air quality - Stationary source emissions -
Determination of total mercury: automated
measuring systems

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 14884:2006 sisaldab Euroopa standardi EN 14884:2005 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 27.02.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 14884:2006 consists of the English text of the European standard EN 14884:2005.</p> <p>This document is endorsed on 27.02.2006 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>
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<p>Käsitlusala:</p> <p>This European Standard specifies specific requirements on automated measuring systems (AMS) for monitoring of total mercury. It is derived from EN 14181, which is the general document on the quality assurance of AMS. It is only applicable in conjunction with EN 14181.</p>	<p>Scope:</p> <p>This European Standard specifies specific requirements on automated measuring systems (AMS) for monitoring of total mercury. It is derived from EN 14181, which is the general document on the quality assurance of AMS. It is only applicable in conjunction with EN 14181.</p>
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Võtmesõnad:

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English Version

Air quality - Stationary source emissions - Determination of total mercury: automated measuring systems

Qualité de l'air - Emissions de sources fixes -
Détermination de la concentration en mercure totale:
systèmes automatiques de mesure

Luftbeschaffenheit - Emissionen aus stationären Quellen -
Bestimmung der Gesamtquecksilber-Konzentration:
Automatische Messeinrichtungen

This European Standard was approved by CEN on 28 November 2005.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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



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Foreword

This European Standard (EN 14884:2005) 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 June 2006, and conflicting national standards shall be withdrawn at the latest by June 2006.

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

Introduction

This European Standard describes the quality assurance procedures related to Automated Measuring Systems (AMS) for the determination of total mercury in flue gas, in order to meet the uncertainty requirements on measured values given by regulations, national or other legislation.

This European Standard is only applicable in conjunction with the general document on quality assurance of AMS described in EN 14181, and provides indications, which are specific to measurements of total mercury.

The calibration and validation of mercury AMS are performed by parallel measurements with the reference manual method described in EN 13211.

The calibration and validation of mercury AMS are performed by parallel measurements with the reference manual method described in EN 13211. The species of mercury (Hg^0 and Hg^{2+}) and the physical occurrence (gaseous, in dust or in droplets) can vary significantly depending on the type of process to be monitored.

A total mercury AMS or a gaseous mercury AMS can be chosen. Whether or not a gaseous mercury AMS can fulfil the requirements for total mercury depends on the process and sampling location.

1 Scope

This European Standard specifies specific requirements on automated measuring systems (AMS) for monitoring of total mercury. It is derived from EN 14181, which is the general document on the quality assurance of AMS. It is only applicable in conjunction with EN 14181.

This European Standard sets specific requirements for the quality assurance levels and annual surveillance test as specified in EN 14181, for mercury AMS used for proving that the mercury emissions from a source are compliant with emission limits between 0,03 mg/m³ and 0,5 mg/m³ ¹⁾ (standard conditions) in ducted gaseous streams. This European Standard is applicable by direct correlation with the standard reference method (SRM) described in EN 13211.

This European Standard is primarily developed for emissions from waste incinerators. From a technical point of view, it may be applied to other processes, for which measurement at an emission limit is required with defined uncertainty.

2 Normative references

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 13211:2001, *Air quality — Stationary source emissions — Manual method of determination of the concentration of total mercury*

EN 14181:2004, *Stationary source emissions — Quality assurance of automated measuring systems*

EN ISO 14956, *Air quality — Evaluation of the suitability of a measurement procedure by comparison with a required measurement uncertainty (ISO 14956:2002)*

EN ISO/IEC 17025:2005, *General requirements for the competence of testing and calibration laboratories (ISO/IEC 17025:2005)*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 13211:2001 and EN 14181:2004 and the following apply.

3.1

automated measuring system (AMS)

measuring system permanently installed on site for continuous monitoring of emissions

NOTE 1 An AMS is a method, which is traceable to a reference method.

NOTE 2 Apart from the analyser, an AMS includes facilities for taking samples (e.g. sample probe, sample gas lines, flow meters, regulators, delivery pumps) and for sample conditioning (e.g. dust filter, moisture removal devices, converters, diluters). This definition also includes testing and adjusting devices that are required for regular functional checks.

¹⁾ m³ expressed as m³ under dry conditions, normalized to 273 K and 101,3 kPa and 11,0 % (volume fraction) O₂ (unless otherwise stated).