

**Heitmed püsiallikatest. Käsitsimeetod  
HCl määramiseks. Osa 2: Gaasiliste  
ühendite absorptsioon**

Stationary source emissions - Manual method of  
determination of HCl - Part 2: Gaseous compounds  
absorption

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1911-2:1999 sisaldab Euroopa standardi EN 1911-2:1998 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 12.12.1999 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1911-2:1999 consists of the English text of the European standard EN 1911-2:1998.</p> <p>This document is endorsed on 12.12.1999 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><b>Käsitlusala:</b> Käesolev Euroopa standard määrab kindlaks meetodi heitgaasides sisalduva vesinikkloriidi absorptsiooniks. Heitgaaside proovid peavad olema võetud ja filtreeritud vastavalt normdokumendile EN 1911-1. Selle tulemusena saadava absorbendilahuse analüüsimisel tuleb lähtuda normdokumendist EN 1911-3.</p>	<p><b>Scope:</b></p>
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**ICS** 13.040.40

**Võtmesõnad:** absorptsioon, emissioon, gaasianalüüs, heitgaasid, kontsentratsioon, kvaliteet, proovivõtmine, vesinikkloriidhape, õhk, õhu saastumine

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Descriptors: Air quality, HCl, emission, measurements.

**English version**

**Stationary source emissions – Manual method  
of determination of HCl**

**Part 2: Gaseous compounds absorption**

Emissions de sources fixes – Mé-  
thode manuelle de dosage du HCl –  
Partie 2: Absorption des composés  
gazeux

Emissionen aus stationären Quellen –  
Manuelle Methode zur Bestimmung  
von HCl – Teil 2: Absorption der  
gasförmigen Verbindungen

This European Standard was approved by CEN on 1998-03-23.

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.

The European Standards exist 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, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

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## Foreword

This European Standard 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 month of October 1998, and conflicting national standards shall be withdrawn at the latest by month of October 1998.

The determination of gaseous hydrogen chloride emissions <sup>1)</sup> from stationary sources by a manual method is divided in three parts described in the following standards :

- EN 1911-1 Stationary source emissions - Manual method of determination of HCl - Part 1 : Sampling of gases
- EN 1911-2 Stationary source emissions - Manual method of determination of HCl - Part 2 : Gaseous compounds absorption
- EN 1911-3 Stationary source emissions - Manual method of determination of HCl - Part 3 : Absorption solutions analysis and calculations

This standard is an integral part of a complete measurement procedure and the use of the two other parts is necessary for determination of hydrogen chloride.

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

<sup>1)</sup> In this standard no distinction is made between hydrogen chloride and hydrochloric acid.

## 1 Scope

This European standard specifies a method for the absorption of hydrogen chloride, in waste gases having been sampled and filtered according to EN 1911-1. The resulting absorption solutions is subsequently analyzed according to EN 1911-3.

The method described applies to ducted gaseous streams emitted by waste incinerators and more generally to waste gases in which HCl concentration may vary between  $1 \text{ mg}\cdot\text{m}^{-3}$  and  $5\,000 \text{ mg}\cdot\text{m}^{-3}$  under normal pressure and temperature conditions (see note).

NOTE : For the purposes of this standard, normal pressure and temperature conditions are 101,325 kPa and 0 °C (273,15 K).

## 2 Normative references

This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 1911-1:1998	Stationary source emissions - Manual method of determination of HCl - Part 1 : Sampling of gases
EN 1911-3	Stationary source emissions - Manual method of determination of HCl - Part 3 : Absorption solutions analysis and calculations
EN ISO 3696:1995	Water for analytical laboratory use - Specification and test methods (ISO 3696:1987)

## 3 Principle

**3.1** The gas stream is sampled and pretreated according to EN 1911-1.

**3.2** HCl and gaseous inorganic chlorides are dissolved by bubbling through chloride-free water. The sampling system is designed to minimise condensation. However, where condensation does or may occur, this part of the equipment is rinsed and added to the absorption solutions.

**3.3** The chloride concentration of the resulting solutions is expressed as HCl concentration in the sampled gas, and the chloride content is then determined according to EN 1911-3.

NOTE : In some circumstances other gaseous chlorides may be present in the gas sample (e.g. ammonium chloride). The procedure to be followed in these cases and with other possible interferences is described in EN 1911-3.