

ICS 13.040.40

English Version

Stationary source emissions - Determination of mass
concentration of fluorinated compounds expressed as HF -
Standard reference method

Émissions de sources fixes - Détermination de la
concentration massique en composés fluorés, exprimée
en HF - Méthode de référence normalisée

Emissionen aus stationären Quellen - Bestimmung der
Massenkonzentration fluorierter Verbindungen,
angegeben als HF - Standardreferenzverfahren

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European foreword

This document (CEN/TS 17340:2020) has been prepared by Technical Committee CEN/TC 264 “Stationary source emissions”, the secretariat of which is held by DIN.

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1 Scope

This document specifies a manual method for the determination of the concentration of fluorinated compounds expressed in HF. Two cases are presented:

- first case: the measurand is the concentration of gaseous and bound to particulates fluorides;
- second case: the measurand is the concentration of gaseous fluorides.

Three analytical techniques are proposed: ionometry, spectrophotometry and ion-exchange chromatography.

This document specifies the performance characteristics to be determined and the performance criteria to be fulfilled when it is used as the Standard Reference Method (SRM) for periodic monitoring and for calibration or control of Automated Measuring Systems (AMS) permanently installed on a stack, for regulatory or other purposes.

This document applies to fluoride concentrations which may vary between 0,1 mg HF/m³ and 10 mg HF/m³, at standard conditions of pressure and temperature (see NOTE). The limit of quantification of the method is estimated at 0,1 mg/m³ for a sampled volume of 0,1 m³.

Interference may occur for some matrices. Known elements that may lead to interference are mentioned in Annex C.

NOTE The Emission Limit Values (ELV) for HF are expressed in mg/m³, for dry gases at the standard conditions ($T_{\text{std}} = 273 \text{ K}$ and $P_{\text{std}} = 101,3 \text{ kPa}$).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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..

EN 13284-1, *Stationary source emissions - Determination of low range mass concentration of dust - Part 1: Manual gravimetric method*

EN 15259, *Air quality - Measurement of stationary source emissions - Requirements for measurement sections and sites and for the measurement objective, plan and report*

EN ISO 10304-1, *Water quality - Determination of dissolved anions by liquid chromatography of ions - Part 1: Determination of bromide, chloride, fluoride, nitrate, nitrite, phosphate and sulfate (ISO 10304-1)*

ISO/IEC Guide 98-3, *Uncertainty of measurement — Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <http://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1

absorber

device in which the compound to be trapped is absorbed into the absorption solution