



National Standards Authority of Ireland

IRISH STANDARD

I.S. EN 13526:2002

ICS 13.040.40

**STATIONARY SOURCE EMISSIONS -  
DETERMINATION OF THE MASS  
CONCENTRATION OF TOTAL GASEOUS  
ORGANIC CARBON IN FLUE GASES FROM  
SOLVENT USING PROCESSES -  
CONTINUOUS FLAME IONISATION  
DETECTOR METHOD**

National Standards  
Authority of Ireland  
Dublin 9  
Ireland

Tel. (01) 807 3800  
Tel (01) 807 3838

*This Irish Standard was  
published under the  
authority of the National  
Standards Authority of  
Ireland  
and comes into effect on  
January 12, 2002*

**NO COPYING WITHOUT NSAI  
PERMISSION EXCEPT AS  
PERMITTED BY COPYRIGHT  
LAW**

© NSAI 2002

**Price Code I**

Údarás um Chaighdeán Náisiúnta na hÉireann



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 13526**

November 2001

ICS 13.040.40

English version

**Stationary source emissions - Determination of the mass concentration of total gaseous organic carbon in flue gases from solvent using processes - Continuous flame ionisation detector method**

Emissionen aus stationären Quellen - Bestimmung der Massenkonzentration des gesamten gasförmigen organisch gebundenen Kohlenstoffs in Abgasen von Prozessen, bei denen Lösungsmittel eingesetzt werden - Kontinuierliches Verfahren unter Verwendung eines Flammenionisationsdetektors

This European Standard was approved by CEN on 29 September 2001.

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 Management Centre 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

## EN 13526:2001 (E)

### Contents

	page
Foreword	3
1 Scope	3
2 Normative references	4
3 Terms and definitions	4
4 Principle	6
5 The apparatus and gases	8
6 Measurement procedure	10
Annex A (informative) Measurement uncertainty and associated statistics	13
Annex B (normative) Determination of the performance characteristics of a FID	15
Annex C (informative) Published response factors for typical components in flue gases of waste incineration plants and in exhaust air from non-thermal plants	17
Annex D (informative) Safety measures	19
Annex E (informative) Recommended minimum operational requirements for long term continuous monitoring applications	20
Annex F (informative) Calculation of total organic carbon mass concentration from volume concentrations	21
Bibliography	22

## 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 May 2002, and conflicting national standards shall be withdrawn at the latest by May 2002.

This European Standard has been prepared under a mandate given to CEN by the European Commission and European Free Trade Association.

The annex B is normative. The annexes A, C, D, E and F are informative.

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.

## 1 Scope

This European Standard specifies a set of minimum performance requirements for an instrument using flame ionisation detection, together with procedures for its calibration and operation, for the measurement of the mass concentration of total gaseous organic carbon (TOC) in flue gases.

This European Standard is suitable for the measurement of gaseous or vapour phase TOC emissions from Solvent Using Processes.

NOTE 1 See Council Directive 1999/13/EEC.

The results obtained using this standard are expressed in milligrams per cubic metre as total carbon ( $\text{mg}/\text{m}^3$ ). This standard is suitable for the measurement of concentrations from  $20 \text{ mg}/\text{m}^3$  to  $500 \text{ mg}/\text{m}^3$  but can be used at lower concentrations.

NOTE 2 By its nature a flame ionisation detector (FID) can also be used to measure higher concentrations.

The method specified in this European Standard can be used as a reference method or, with suitable minimum operational requirements, for continuous monitoring. It can also be used for the calibration of automated measuring systems. An indication of the uncertainty of the measurement is shown in annex A.

EN 13526:2001 (E)

## 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 this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN 13649	Stationary source emissions - Determination of the mass concentration of individual gaseous organic compounds – Activated carbon and solvent desorption method.
ISO 5725-1	Accuracy (trueness and precision) of measurement methods and results Part 1: General principles and definitions.
ISO 6879	Air quality - Performance characteristics and related concepts for air quality measuring methods.
ISO 9169	Air Quality – Determination of performance characteristics of measurement methods.

## 3 Terms and definitions

For the purpose of this CEN Standard, the following definitions apply.

### 3.1

#### **combustion air**

air supply used for the combustion of fuel gas in an instrument using flame ionisation detection

### 3.2

#### **complimentary gas**

component of a calibration gas mixture which completes a calibration gas mixture

### 3.3

#### **detection limit**

minimum concentration of a substance which produces an observable response, as detailed in annex B and referred to in ISO 9169

### 3.4

#### **dilution gas**

gas used to dilute sampled flue gas to prevent water condensation

### 3.5

#### **flame ionisation detector (FID)**

instrument using flame ionisation detection

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- Looking for additional Standards? Visit Intertek Inform Infostore
  - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-