



SLOVENSKI STANDARD
SIST EN ISO 16000-15:2009
01-marec-2009

BcHfUb`j`nfU_`!`%) "XY.`GhfUM[]`Uj ncf Yb`UnUXi ý]_cj `X]c_g]X`fBC&L`fIGC``% \$\$\$!
%) .&\$\$, Ł

Indoor air - Part 15: Sampling strategy for nitrogen dioxide (NO₂) (ISO 16000-15:2008)

Innenraumlufverunreinigungen - Teil 15: Probenahmestrategie für Stickstoffdioxid (NO₂) (ISO 16000-15:2008)

Air intérieur - Partie 15: Stratégie d'échantillonnage du dioxyde d'azote (NO₂) (ISO 16000-15:2008)

ITeH STANDARD PREVIEW

(standards.iteh.ai)

SIST EN ISO 16000-15:2009

Ta slovenski standard je istoveten z: **EN ISO 16000-15:2008**

<https://standards.iteh.ai/catalog/standards/sist/b84ae2be-ac35-4774-8113-c5bc488f0076/sist-en-iso-16000-15-2009>

ICS:

13.040.20 Kakovost okoljskega zraka Ambient atmospheres

SIST EN ISO 16000-15:2009

en,fr,de

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 16000-15:2009

<https://standards.iteh.ai/catalog/standards/sist/b84ac2be-ac35-4774-8113-c3be488f6b76/sist-en-iso-16000-15-2009>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 16000-15

July 2008

ICS 13.040.20

English Version

**Indoor air - Part 15: Sampling strategy for nitrogen dioxide
(NO₂) (ISO 16000-15:2008)**

Air intérieur - Partie 15: Stratégie d'échantillonnage du
dioxyde d'azote (NO₂) (ISO 16000-15:2008)

Innenraumluftverunreinigungen - Teil 15:
Probenahmestrategie für Stickstoffdioxid (NO₂) (ISO
16000-15:2008)

This European Standard was approved by CEN on 11 July 2008.

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

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

[SIST EN ISO 16000-15:2009](https://standards.iteh.ai/catalog/standards/sist/b84ae2be-ac35-4774-8113-c3be488f6b76/sist-en-iso-16000-15-2009)

<https://standards.iteh.ai/catalog/standards/sist/b84ae2be-ac35-4774-8113-c3be488f6b76/sist-en-iso-16000-15-2009>



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

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

Contents

Page

Foreword.....3

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN ISO 16000-15:2009](https://standards.iteh.ai/catalog/standards/sist/b84ac2be-ac35-4774-8113-c3be488f6b76/sist-en-iso-16000-15-2009)
<https://standards.iteh.ai/catalog/standards/sist/b84ac2be-ac35-4774-8113-c3be488f6b76/sist-en-iso-16000-15-2009>

Foreword

This document (EN ISO 16000-15:2008) has been prepared by Technical Committee ISO/TC 146 "Air quality" in collaboration with 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 January 2009, and conflicting national standards shall be withdrawn at the latest by January 2009.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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

Endorsement notice

The text of ISO 16000-15:2008 has been approved by CEN as a EN ISO 16000-15:2008 without any modification.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
SIST EN ISO 16000-15:2009
<https://standards.iteh.ai/catalog/standards/sist/b84ae2be-ac35-4774-8113-c3be488f6b76/sist-en-iso-16000-15-2009>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 16000-15:2009

<https://standards.iteh.ai/catalog/standards/sist/b84ac2be-ac35-4774-8113-c3be488f6b76/sist-en-iso-16000-15-2009>

INTERNATIONAL
STANDARD

ISO
16000-15

First edition
2008-07-15

Indoor air —

Part 15:

**Sampling strategy for nitrogen dioxide
(NO₂)**

Air intérieur —

iTeh STANDARD PREVIEW
Partie 15: Stratégie d'échantillonnage du dioxyde d'azote (NO₂)
(standards.iteh.ai)

SIST EN ISO 16000-15:2009

<https://standards.iteh.ai/catalog/standards/sist/b84ac2be-ac35-4774-8113-c3be488f6b76/sist-en-iso-16000-15-2009>



Reference number
ISO 16000-15:2008(E)

© ISO 2008

ISO 16000-15:2008(E)

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN ISO 16000-15:2009](https://standards.iteh.ai/catalog/standards/sist/b84ae2be-ac35-4774-8113-c3be488f6b76/sist-en-iso-16000-15-2009)

<https://standards.iteh.ai/catalog/standards/sist/b84ae2be-ac35-4774-8113-c3be488f6b76/sist-en-iso-16000-15-2009>

**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2008

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword.....	iv
Introduction	vi
1 Scope	1
2 Normative references	1
3 Properties, origin and occurrence of nitrogen dioxide.....	1
4 Regulations	2
5 Measurement technique.....	3
5.1 General.....	3
5.2 Short-term measurements	3
5.3 Long-term measurements.....	3
5.4 Pre-testing	4
6 Measurement planning.....	4
6.1 General.....	4
6.2 Measurement objective and boundary conditions.....	4
6.3 Measurement time.....	6
6.4 Sampling period and measurement frequency	6
6.5 Measurement location.....	7
6.6 Measurement uncertainty and presentation of result.....	7
6.7 Quality assurance.....	7
Annex A (informative) Information on diffusive samplers.....	9
Annex B (informative) Examples of screening tests	10
Bibliography	11

ISO 16000-15:2008(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 16000-15 was prepared by Technical Committee ISO/TC 146, *Air quality*, Subcommittee SC 6, *Indoor air*.

ISO 16000 consists of the following parts, under the general title *Indoor air*:

- *Part 1: General aspects of sampling strategy*
- *Part 2: Sampling strategy for formaldehyde*
- *Part 3: Determination of formaldehyde and other carbonyl compounds — Active sampling method*
- *Part 4: Determination of formaldehyde — Diffusive sampling method*
- *Part 5: Sampling strategy for volatile organic compounds (VOCs)*
- *Part 6: Determination of volatile organic compounds in indoor and test chamber air by active sampling on Tenax TA[®] sorbent, thermal desorption and gas chromatography using MS/FID*
- *Part 7: Sampling strategy for determination of airborne asbestos fibre concentrations*
- *Part 8: Determination of local mean ages of air in buildings for characterizing ventilation conditions*
- *Part 9: Determination of the emission of volatile organic compounds from building products and furnishing — Emission test chamber method*
- *Part 10: Determination of the emission of volatile organic compounds from building products and furnishing — Emission test cell method*
- *Part 11: Determination of the emission of volatile organic compounds from building products and furnishing — Sampling, storage of samples and preparation of test specimens*
- *Part 12: Sampling strategy for polychlorinated biphenyls (PCBs), polychlorinated dibenzo-p-dioxins (PCDDs), polychlorinated dibenzofurans (PCDFs) and polycyclic aromatic hydrocarbons (PAHs)*
- *Part 13: Determination of total (gas and particle-phase) polychlorinated dioxin-like biphenyls (PCBs) and polychlorinated dibenzo-p-dioxins/dibenzofurans (PCDDs/PCDFs) — Collection on sorbent-backed filters*

- *Part 14: Determination of total (gas and particle-phase) polychlorinated dioxin-like biphenyls (PCBs) and polychlorinated dibenzo-p-dioxins/dibenzofurans (PCDDs/PCDFs) — Extraction, clean-up and analysis by high-resolution gas chromatography/mass spectrometry*
- *Part 15: Sampling strategy for nitrogen dioxide (NO₂)*
- *Part 16: Detection and enumeration of moulds — Sampling by filtration*
- *Part 17: Detection and enumeration of moulds — Culture-based method*
- *Part 23: Performance test for evaluating the reduction of formaldehyde concentrations by sorptive building materials*

The following parts are under preparation:

- *Part 18: Detection and enumeration of moulds — Sampling by impaction*
- *Part 19: Sampling strategy for moulds*
- *Part 24: Performance test for evaluating the reduction of the concentrations of volatile organic compounds and carbonyl compounds without formaldehyde concentrations by sorptive building materials*
- *Part 25: Determination of the emission of semi-volatile organic compounds by building products — Micro-chamber method*
- *Part 28: Sensory evaluation of emissions from building materials and products*

The following parts are planned:

- *Part 20: Detection and enumeration of moulds — Sampling from house dust*
- *Part 21: Detection and enumeration of moulds — Sampling from materials*
- *Part 22: Detection and enumeration of moulds — Molecular methods*
- *Part 27: Standard method for the quantitative analysis of asbestos fibres in settled dust*

Furthermore,

- ISO 12219-1¹⁾, *Indoor air — Road vehicles — Part 1: Whole vehicle test chamber — Specification and method for the determination of volatile organic compounds in car interiors*, and
- the two International Standards for indoor air, ambient air and workplace atmosphere, ISO 16017-1^[44] on pumped sampling and ISO 16017-2^[45] on diffusive sampling

focus on volatile organic compound (VOC) measurements.

1) Under preparation.