DIN EN ISO 16000-9

DIN

This standard has been included in the VDI/DIN Handbook on air quality, Volume 5.

ICS 13.040.40

Supersedes
DIN EN ISO 16000-9:2006-06

Indoor air –
Part 9: Determination of the emission of volatile organic compounds from building products and furnishing –
Emission test chamber method (ISO 16000-9:2006)
English version of DIN EN ISO 16000-9:2008-04

Innenraumluftverunreinigungen –
Teil 9: Bestimmung der Emission von flüchtigen organischen Verbindungen aus Bauprodukten und Einrichtungsgegenständen –
Emissionsprüfkammer-Verfahren (ISO 16000-9:2006)
Englische Fassung DIN EN ISO 16000-9:2008-04

Document comprises 25 pages

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National foreword

International technical legislation pertaining to indoor air

This standard has been prepared by Technical Committee ISO/TC 146 “Air quality”, Subcommittee SC 6 “Indoor air”, Working Group WG 3 “Determination of volatile organic compounds (VOCs) in indoor air” in collaboration with Technical Committee CEN/TC 264 “Air quality”, Working Group 7 “Indoor air — Emission of chemical substances from building materials”.

The responsible German body involved in its preparation was the *Kommission Reinhaltung der Luft (KRdL) im VDI und DIN-Normenausschuss* (Commission on Air Pollution Prevention of VDI and DIN Standards Committee), Section IV *Umweltmesstechnik*.

The requirements for emission test chambers and their operation specified in this standard apply together with those specified in

— DIN EN ISO 16000-11 for the preparation of test specimens for emission testing in an emission test chamber,

and

— DIN ISO 16000-6, which deals with the determination of VOCs.

Depending on the objective of the measurement, emission test cells as described in DIN EN ISO 16000-10 may also be used as an alternative to the present standard.

The DIN Standards corresponding to the International Standards referred to in clause 2 of the EN are as follows:

ISO 16000-6 DIN EN ISO 16000-6
ISO 16000-11 DIN EN ISO 16000-11

Amendments

This standard differs from DIN V ENV 13419-1:1999-10 as follows:

a) The text of the standard has been editorially revised to take account of the requirements for the test chamber.

Compared with DIN EN ISO 16000-9:2006-06, the following correction has been made only to the German version:

b) Subclause 9.4, 1st paragraph: “…as referred to in Annex D.” has been replaced by references to [5], [6], [7] and [9] under Bibliography.

Previous editions

DIN V ENV 13419-1: 1999-10
DIN EN ISO 16000-9: 2006-06

National technical legislation pertaining to indoor air

General conditions and other aspects to be taken into consideration when planning indoor air measurements are described for individual substances and substance groups in the VDI 4300 series (see also “National Annex NA”). Many of these served as the sole basis for parts of the ISO 16000 series (e.g. ISO 16000-1, ISO 16000-2, ISO 16000-5, ISO 16000-7, ISO 16000-12 and ISO 16000-15). The specific procedures

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(sampling, analysis) are described in the VDI 4301 series for individual substances and substance groups. Methods which can be used for both indoor and ambient air measurements are described in further VDI guidelines.

Thus the following technical rules dealing with indoor air measurement are available:

— DIN ISO 16000 series and DIN EN ISO 16000 series: Standards which have been adopted at national level, and

— VDI 4300 series and VDI 4301 Blatt 1: Guidelines which have been developed at national level.

DIN ISO 16000 series and DIN EN ISO 16000 series consist of the following parts, under the general title *Indoor air*:

— DIN EN ISO 16000-1, *General aspects of sampling strategy*

— DIN EN ISO 16000-2, *Sampling strategy for formaldehyde*

— DIN ISO 16000-3, *Determination of formaldehyde and other carbonyl compounds — Active sampling method*

— DIN ISO 16000-4, *Determination of formaldehyde — Diffusive sampling method*

— DIN EN ISO 16000-5, *Measurement strategy for volatile organic compounds (VOCs)*

— DIN ISO 16000-6, *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*

— DIN EN ISO 16000-7, *Sampling strategy for determination of airborne asbestos fibre concentrations*

— DIN ISO 16000-8, *Determination of local mean ages of air in buildings for characterizing ventilation conditions*

— DIN EN ISO 16000-9, *Determination of the emission of volatile organic compounds from building products and furnishing — Emission test chamber method*

— DIN EN ISO 16000-10, *Determination of the emission of volatile organic compounds from building products and furnishing — Emission test cell method*

— DIN EN ISO 16000-11, *Determination of the emission of volatile organic compounds from building products and furnishing — Sampling, storage of samples and preparation of test specimens*

— DIN EN ISO 16000-12, *Sampling strategy for polychlorinated biphenyls (PCBs), polychlorinated dibenzo-p-dioxins (PCDDs), polychlorinated dibenzofurans (PCDFs) and polycyclic aromatic hydrocarbons (PAHs)*

— DIN ISO 16000-13, *Determination of total (gas and particle-phase) polychlorinated dioxin-like biphenyls and polychlorinated dibenzo-p-dioxins/dibenzofurans — Collection on sorbent-backed filters*

— DIN ISO 16000-14, *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*

— DIN EN ISO 16000-15, *Sampling strategy for nitrogen dioxide (NO_2)*

— DIN ISO 16000-16, *Detection and enumeration of moulds — Sampling by filtration*

— DIN ISO 16000-17, *Detection and enumeration of moulds — Culture-based method*

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— DIN ISO 16000-23, *Performance test for evaluating the reduction of formaldehyde concentrations by sorptive building materials*

The following parts are under preparation:

— DIN ISO 16000-18, *Detection and enumeration of moulds — Sampling by impaction*

— DIN ISO 16000-19, *Sampling strategy for moulds*

— DIN ISO 16000-24, *Performance test for evaluating the reduction of the concentrations of volatile organic compounds and carbonyl compounds (except formaldehyde) by sorptive building materials*

— DIN ISO 16000-25, *Determination of the emission of semi-volatile organic compounds by building products — Micro-chamber method*

— DIN ISO 16000-27, *Determination of asbestos fibres in settled dust*

— DIN ISO 16000-28, *Sensory evaluation of emissions from building materials and products*

The following parts are at the planning stage:

— DIN ISO 16000-20, *Detection and enumeration of moulds — Determination of total spore count*

— DIN ISO 16000-21, *Detection and enumeration of moulds — Sampling from materials*

— DIN ISO 16000-22, *Detection and enumeration of moulds — Molecular methods*

National Annex NA
(informative)

Bibliography

DIN EN 14412, *Indoor air quality — Diffusive samplers for the determination of concentrations of gases and vapours — Guide for selection, use and maintenance*

DIN EN ISO 16017-1, *Indoor, ambiant and workplace air — Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography — Part 1: Pumped sampling*

DIN EN ISO 16017-2, *Indoor, ambient and workplace air — Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography — Part 2: Diffusive sampling*

DIN EN ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*

DIN ISO 12884, *Ambient air — Determination of total (gas and particle phase) polycyclic aromatic hydrocarbons — Collection on sorbent-backed filters with gas chromatographic/mass spectrometric analysis*

DIN ISO 16362, *Ambient air — Determination of particle-phase polycyclic aromatic hydrocarbons by high performance liquid chromatography*

DIN V EN V 13005, *Guide to the expression of uncertainty in measurement*

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