

**Air quality - Definition and
determination of performance
characteristics of an automatic
measuring system**

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performance characteristics of an automatic
measuring system

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 9169:2006 sisaldab Euroopa standardi EN ISO 9169:2006 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 30.08.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 9169:2006 consists of the English text of the European standard EN ISO 9169:2006.</p> <p>This document is endorsed on 30.08.2006 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>Käsitlusala: This International Standard provides definitions and specifies methods to determine performance characteristics of an identified automatic air quality measuring system. Tests are carried out under stable laboratory conditions or field conditions. The automatic measuring system is considered as a black box operated according to specified procedures.</p>	<p>Scope: This International Standard provides definitions and specifies methods to determine performance characteristics of an identified automatic air quality measuring system. Tests are carried out under stable laboratory conditions or field conditions. The automatic measuring system is considered as a black box operated according to specified procedures.</p>
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Air quality - Definition and determination of performance characteristics of an automatic measuring system (ISO 9169:2006)

Qualité de l'air - Définition et détermination de caractéristiques de performance d'un système automatique de mesure (ISO 9169:2006)

Luftbeschaffenheit - Definition und Ermittlung von Verfahrenskenngrößen einer automatischen Messeinrichtung (ISO 9169:2006)

This European Standard was approved by CEN on 26 June 2006.

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Foreword

This document (EN ISO 9169:2006) 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 2007, and conflicting national standards shall be withdrawn at the latest by January 2007.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, 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.

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The text of ISO 9169:2006 has been approved by CEN as EN ISO 9169:2006 without any modifications.

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**Air quality — Definition and
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*Qualité de l'air — Définition et détermination de caractéristiques de
performance d'un système automatique de mesurage*



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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.

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ISO 9169 was prepared by Technical Committee ISO/TC 146, *Air quality*, Subcommittee SC 4, *General aspects*.

This second edition cancels and replaces the first edition (ISO 9169:1994), of which it constitutes a technical revision, and ISO 6879:1995.

Introduction

In this International Standard, automatic air quality measuring systems are considered as *black boxes* operated according to specified procedures as described in the terms of reference given by the client to the laboratory performing the tests aiming at determining performance characteristics selected by the client for each automatic measuring system.

This International Standard specifies definitions and methods to determine performance characteristics of automatic air quality measuring systems. This is done for most performance characteristics under steady laboratory conditions so as to have available data on clearly defined characteristics, based on specified conditions that can be adjusted and maintained in laboratory. This is also done under field conditions for a few performance characteristics for which field testing provide relevant additional information.

Air quality — Definition and determination of performance characteristics of an automatic measuring system

1 Scope

This International Standard provides definitions and specifies methods to determine performance characteristics of an identified automatic air quality measuring system. Tests are carried out under stable laboratory conditions or field conditions. The automatic measuring system is considered as a *black box* operated according to specified procedures.

This International Standard applies to measuring systems for which the following information is available:

- a description of the automatic measuring system providing the result of measurement in the physical unit of the measurand;
- operating procedures of the automatic measuring system including, where appropriate, the procedures of routine adjustment, routine verification and calibration;
- terms of reference for the test program specifying the client requirements and test conditions.

This International Standard applies to measuring systems for which it is possible to apply several reference materials with accepted values with known uncertainty for the measurand, within the range of application.

This International Standard does not specify the number of automatic measuring systems to be tested.

NOTE 1 The number of automatic measuring systems is specified by the client in the terms of reference.

NOTE 2 The list of performance characteristics in this document is limited. Additional performance characteristics can be specified by the client in the terms of reference, if appropriate.

2 Terms and definitions

For the purpose of this document, the following terms and definitions apply. Definitions taken from VIM^[1] are generally kept identical. Some definitions have been adapted from VIM to take into account the specific wordings of the present International Standard.

2.1 General terms

2.1.1

measuring system

complete set of measuring instruments and other equipment with operating procedures to carry out specified air quality measurements

NOTE 1 Adapted from VIM:1993, 4.5.

NOTE 2 In general, a measuring system encompasses the different steps of the measurement process, such as taking the sample, the analytical quantification, etc.