AS EN 13725:2025
EN 13725:2022

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Stationary source emissions — Determination of odour concentration by dynamic olfactometry and odour emission rate

This national standard is the identical adoption of EN 13725:2022 with the permission of the European Committee for Standardization — CEN, Rue de la Science 23, B — 1040 Brussels, Belgium.

AS EN 13725:2025

This Australian Standard ® was prepared by EV-007, Methods for Examination of Air. It was approved on behalf of Standards Australia's Standards Development and Accreditation Committee on 12 February 2025.

This Standard was published on 14 March 2025.

The following are represented on Committee EV-007:

ACT Health
Australian Aluminium Council
Australian Industry Group
Clean Air Society of Australia & New Zealand
Department of the Environment, Tourism, Science and Innovation, Qld
Department of Planning and Environment, NSW
Department of Water and Environmental Regulation, WA
Environment Protection Authority, Vic.
National Association of Testing Authorities Australia
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This Standard was issued in draft form for comment as DR AS EN 13725:2024.

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ISBN 978 1 76175 069 4

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Originated as AS/NZS 4323.3:2001.
Revised and redesignated AS EN 13725:2025.

Preface

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee EV-007, Methods for Examination of Air, to supersede AS/NZS 4323.3:2001, *Stationary source emissions, Part 3: Determination of odour concentration by dynamic olfactometry.*

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this document as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of this document is to specify an objective method for the determination of the odour concentration of a gaseous sample using dynamic olfactometry with human assessors. The document also specifies a method for the determination of the odour emission rate from stationary sources.

This document is identical with, and has been reproduced from, EN 13725:2022, *Stationary source emissions — Determination of odour concentration by dynamic olfactometry and odour emission rate*.

As this document has been reproduced from an International document, a full point substitutes for a comma when referring to a decimal marker.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms "normative" and "informative" are used in Standards to define the application of the appendices or annexes to which they apply. A "normative" appendix or annex is an integral part of a Standard, whereas an "informative" appendix or annex is only for information and guidance.

NOTES

Contents

Page

European foreword

This document (EN 13725:2022) 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 August 2022, and conflicting national standards shall be withdrawn at the latest by August 2022.

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

This document supersedes EN 13725:2003. The methods defined in the first edition and its associated quality criteria have been validated in numerous proficiency tests.

The main changes in this revision relative to the first edition EN 13725:2003 are listed in informative Annex N.

Annexes A, B, C, D, E, F, G, H, I, J, K, L, M and N are all informative.

Any feedback and questions on this document should be directed to the users national standards body. A complete listing of these bodies can be found on the CEN website.

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

1 Scope

This document specifies an objective method for the determination of the odour concentration of a gaseous sample using dynamic olfactometry with human assessors. The document also specifies a method for the determination of the odour emission rate from stationary sources, in particular:

a) point sources (conveyed or ducted emissions);

b) active area sources (e.g. biofilters).

The primary application of this document is to provide a common basis for evaluation of odour emissions.

When this document is used for the determination of the odour concentration or the odour emission rate of stationary source emissions, the other relevant European Standards concerning stationary source emissions apply, in particular EN 15259 and EN ISO 16911-1, especially when measurements have to comply with the relevant European Directives concerning industrial air emissions.

Even so, the analysis/quantification step of the measurement method described in this document (i.e. the determination of the odour concentration of an odorous gas sample, without respect to the origin of the sample itself) may be fully applied in many cases not related with industrial emission sources (e.g. the measurement of the mass concentration at the detection threshold of odorant substances, the determination of effectiveness of deodorising systems for indoor air). In those latter cases, the requirements in this document concerning the measurement planning and the sampling of stationary sources may be ignored or adapted.

This document is applicable to the measurement of odour concentration of odorous gas, mixtures of odorants of defined composition and undefined mixtures of odorants in air or nitrogen, using dynamic olfactometry with a panel of human assessors being the sensor. The unit of measurement is the European odour unit per cubic metre: ou_E/m^3. The odour concentration is measured by determining the dilution factor required to reach the detection threshold. The odour concentration at the detection threshold is by definition 1 ou_E/m^3. The odour concentration is then expressed in terms of multiples of the detection threshold. The range of measurement is typically from 10^1 ou_E/m^3 to 10^7 ou_E/m^3 (including pre-dilution).

The field of application of this document includes:

1) the measurement of the mass concentration at the detection threshold of odorants in g/m^3;

2) the determination of the OTC_M value of secondary reference odorant gas, in mol;

3) the measurement of the odour concentration of mixtures of odorants in ou_E/m^3;

4) the measurement of the odour emission rate from point sources and active area sources, including pre-dilution during sampling;

5) the sampling of odorous gases from emissions of high humidity and temperature (up to 200 °C);

6) the determination of effectiveness of mitigation techniques used to reduce odour emissions.

The determination of odour emissions requires measurement of gas velocity to determine the volume flow rate.

The field of application of this document does not include:

i. the measurement of odours potentially released by particles of odorous solids or droplets of odorous fluids suspended in emissions;

ii. the measuring strategy to be applied in case of variable emission rates;