

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

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**Cooking fume extractors – Methods for measuring performance**

**Extracteurs de fumée de cuisine – Méthodes de mesure de l'aptitude à la fonction**



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## CONTENTS

FOREWORD .....	4
1 Scope .....	6
2 Normative references .....	6
3 Terms and definitions .....	7
4 Classification .....	9
5 List of measurements .....	9
6 General conditions for measurements .....	9
6.1 Test room .....	9
6.2 Installation and positioning .....	9
6.3 Electricity supply .....	10
6.4 Filters .....	10
6.5 Fan control .....	10
6.6 Instrumentation and measurements .....	10
7 Dimensions and mass .....	11
7.1 Overall dimensions .....	11
7.2 Distance between cooking fume extractor and cooking appliance .....	11
7.3 Mass .....	12
8 Power measurement of low power modes .....	12
9 Airborne acoustical noise .....	12
10 Volumetric airflow .....	12
10.1 Purpose .....	12
10.2 Measuring setup .....	12
10.3 Measurement of the volumetric airflow .....	14
10.4 Calculation of the fluid dynamic efficiency ( $FDE_{hood}$ ) .....	16
11 Effectiveness of the lighting system .....	17
11.1 Purpose .....	17
11.2 Measurement .....	17
11.3 Assessment .....	19
12 Odour reduction .....	19
12.1 Purpose .....	19
12.2 Measuring setup .....	19
12.3 Measurement .....	21
12.4 Calculation of the odour reduction factor .....	21
13 Grease absorption .....	22
13.1 Purpose .....	22
13.2 Measuring setup .....	22
13.3 Preparation .....	26
13.3.1 Determining the mass .....	26
13.3.2 Warm-up period .....	27
13.4 Measurement .....	27
13.5 Assessment .....	27
Bibliography .....	29
Figure 1 – Measurement of airflow .....	13

Figure 2 – Example working point of a cooking fume extractor in extraction mode ..... 15

Figure 3 – Example diagram of the best efficiency point (BEP) ..... 17

Figure 4 – Measurement points for assessing the effectiveness of the lighting system ..... 19

Figure 5 – Example of a test room ..... 20

Figure 6 – Chamber for the grease absorption of a range hood or a microwave hood  
combination ..... 24

Figure 7 – Chamber for the grease absorption of a down-draft system ..... 25

Figure 8 – Cookware used for measuring the grease absorption ..... 26

  

Table 1 – Instruments ..... 11

Table 2 – Measurements ..... 11

Table 3 – Relevant measurement points for assessing the effectiveness of the lighting  
system ..... 18

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## **COOKING FUME EXTRACTORS – METHODS FOR MEASURING PERFORMANCE**

### FOREWORD

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International Standard IEC 61591 has been prepared by subcommittee 59K: Performance of household and similar electrical cooking appliances, of IEC technical committee 59: Performance of household and similar electrical appliances.

This second edition cancels and replaces the first edition published in 1997, Amendment 1:2005 and Amendment 2:2010. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) new subclause about instruments and measurements (see 6.6);
- b) new procedure for measuring the fluid dynamic efficiency (FDE), which follows the CENELEC proposal in principle;
- c) revised procedure for determining the odour reduction for cooking fume extractors in recirculation mode (see Clause 12);
- d) modification to the measurement of the effectiveness of the lighting system (see Clause 11);
- e) clearer procedure to measure the grease absorption (see Clause 13);

The text of this International Standard is based on the following documents:

CDV	Report on voting
59K/304/CDV	59K/306/RVC

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

In this standard, the following print types are used:

- terms listed in Clause 3: **Arial bold**.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

# COOKING FUME EXTRACTORS – METHODS FOR MEASURING PERFORMANCE

## 1 Scope

This document applies to **cooking fume extractors** incorporating a fan for the **recirculation** or **extraction mode** situated in a household kitchen.

It can also be used for **cooking fume extractors** where the fan is mounted separately from the appliance, but controlled by the appliance when the fan is defined in the technical documentation (e.g. name plate data) and instructions for installation.

This document deals also with **down-draft systems** arranged beside, behind or under the cooking appliance.

This document defines the main performance characteristics of these appliances, which are of interest to the user, and specifies methods for measuring these characteristics.

This document does not specify a classification or ranking for performance.

NOTE This document does not deal with safety requirements that are in accordance with IEC 60335-1 and IEC 60335-2-31.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60584-1, *Thermocouples – Part 1: EMF specifications and tolerances*

IEC 60704-2-13, *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise – Part 2-13: Particular requirements for range hoods and other cooking fume extractors*

IEC 62301, *Household electrical appliances – Measurement of standby power*

ISO 5167-1, *Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full – Part 1: General principles and requirements*

ISO 5167-2, *Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full – Part 2: Orifice plates*

ISO 5167-3, *Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full – Part 3: Nozzles and Venturi nozzles*

ISO 5167-4, *Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full – Part 4: Venturi tubes*

ISO 80000-1:2009, *Quantities and units – Part 1: General*