



IEC 60704-2-10

Edition 3.0 2024-09
EXTENDED VERSION

INTERNATIONAL STANDARD



This full version of IEC 60704-2-10:2024 includes the content of the references made to IEC 60704-1:2021

**Household and similar electrical appliances – Test code for the determination of airborne acoustical noise –
Part 2-10: Particular requirements for ranges, ovens, steam ovens, grills and microwave ovens**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 17.140.20; 97.040.20

ISBN 978-2-8322-9677-6

Warning! Make sure that you obtained this publication from an authorized distributor.

CONTENTS

FOREWORD	4
INTRODUCTION to IEC 60704-1:2021	7
INTRODUCTION to IEC 60704-2-10:2024	8
1 Scope	9
2 Normative references	9
3 Terms and definitions	10
4 Measurement methods and acoustical environments	12
4.1 General	12
4.2 Direct method	13
4.3 Comparison method	13
4.4 Acoustical environments	14
4.4.1 General requirements and criterion for adequacy of the test environment	14
4.4.2 Criterion for background noise level	14
4.4.3 Environmental conditions	14
4.5 Measurement uncertainties	15
4.5.1 General	15
4.5.2 Standard deviations on repeatability and reproducibility and standard deviations related to declaration and verification	15
5 Instrumentation	15
5.1 Instrumentation for measuring acoustical data	15
5.2 Instrumentation for measuring climatic conditions	16
5.3 Instrumentation for measuring operating conditions	16
6 Operation and location of appliances under test	16
6.1 Equipping and pre-conditioning of appliances	16
6.2 Supply of electric energy and of water or gas	17
6.3 Climatic conditions	17
6.4 Loading and operating of appliances during tests	18
6.5 Location and mounting of appliances	20
7 Measurement of sound pressure levels	22
7.1 Microphone array, measurement surface and RSS location for essentially free field conditions over reflecting plane(s)	22
7.2 Microphone array and RSS location in hard-walled test rooms	24
7.3 Microphone array and RSS location in special reverberation test rooms	25
7.4 Measurements	25
8 Calculation of sound pressure and sound power levels	25
8.1 General	25
8.2 Corrections for background noise levels	26
8.3 Corrections for the test environment	26
8.4 Calculation of sound pressure level averaged over the microphone positions	26
8.5 Calculation of sound power levels with the comparison method	27
8.6 Calculation of sound power levels in free field conditions over a reflecting plane	27
8.7 Calculation of A-weighted sound power level with the direct method in special reverberation test rooms	28
9 Information to be recorded	28

9.1	General data	28
9.2	Description of appliance under test	28
9.3	Measurement method	29
9.4	Acoustical test environment	29
9.5	Instrumentation	29
9.6	Equipment and pre-conditioning of appliance under test	29
9.7	Electric supply, water supply, etc.	29
9.8	Climatic conditions	30
9.9	Operation of the appliance under test	30
9.10	Location and mounting of the appliance under test.....	30
9.11	Microphone array	30
9.12	Measurement data	30
9.13	Calculated sound pressure and sound power levels	31
9.14	Reporting	31
10	Information to be reported	31
10.1	General data	31
10.2	Appliance under test	31
10.3	Test conditions for the appliance.....	31
10.4	Acoustical data	32
Annex A (normative) Standard test table		33
Annex B (normative) Test enclosure		34
Annex C (informative) Guidelines for the design of simple test rooms with essentially free field conditions.....		35
Bibliography.....		36
Figure 1 – Measurement surface – parallelepiped – with key microphone positions, for floor free-standing appliances		22
Figure 2 – Measurement surface – parallelepiped – with key microphone positions, for floor standing appliances placed against a wall.....		23
Figure 3 – Measurement surface – parallelepiped – with key microphone positions, for high floor-standing appliances placed against a wall.....		24
Figure B.1 – Test enclosure		34
Table 1 – Standard deviations of sound power levels.....		15
Table 2 – Standard deviations for declaration and verification.....		15
Table 101 – Settings and measurement time		19

INTERNATIONAL ELECTROTECHNICAL COMMISSION

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – TEST CODE FOR THE DETERMINATION OF AIRBORNE ACOUSTICAL NOISE –

Part 2-10: Particular requirements for ranges, ovens, steam ovens, grills and microwave ovens

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at <https://patents.iec.ch>. IEC shall not be held responsible for identifying any or all such patent rights.

This extended version (EXV) of the official IEC Standard provides the user with the full content of the Standard.

IEC 60704-2-10:2024 EXV includes the content of IEC 60704-2-10:2024, and the references made to IEC 60704-1:2021.

The specific content of IEC 60704-2-10:2024 is displayed on a **blue background.**

IEC 60704-2-10 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. It is an International Standard.

This third edition cancels and replaces the second edition published in 2011. This edition constitutes a technical revision.

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

- a) alignment with the fourth edition of IEC 60704-1:2021;
- b) alignment with IEC 60350-1:2023 regarding the definitions and settings;
- c) introduction of the measurement of the steam function;
- d) revision of settings and test parameters.

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

Draft	Report on voting
59K/396/FDIS	59K/398/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

This document is intended to be used in conjunction with IEC 60704-1:2021, *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise – Part 1: General requirements*.

The relevant text of IEC 60704-1:2021 as amended by this publication establishes the test code ranges, ovens, steam ovens, grills and microwave ovens.

This document supplements or modifies the corresponding clauses in IEC 60704-1:2021. When a particular subclause of IEC 60704-1:2021 is not mentioned in this document, that subclause is applicable as far as reasonable. Where this document states "addition", "modification" or "replacement", the relevant requirements, test specifications or explanatory matter in IEC 60704-1:2021 are to be adapted accordingly.

Subclauses, tables and figures that are numbered starting from 101 are additional to those in IEC 60704-1:2021. Additional annexes are lettered AA, BB, etc.

Unless notes are in a new subclause or involve notes in IEC 60704-1:2021, they are numbered starting from 101, including those in a replaced clause or subclause.

In this standard, the following print types are used:

- terms defined in Clause 3: bold type.

A list of all parts in the IEC 60704 series, published under the general title *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise*, can be found on the IEC website.

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

- reconfirmed,
- withdrawn, or
- revised.

IMPORTANT – The "colour inside" logo on the cover page of this document indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION to IEC 60704-1:2021

Although the noise emitted by household appliances does not generally present a hazard to the hearing of the operator and other exposed persons, the need for standardization procedures for the determination of the noise emitted has been recognized for a long time. Such procedures should be specified, not only for special types of appliances, but also the principles should be applicable to the majority of appliances in general use.

Generally, the determination of noise levels is only part of a comprehensive testing procedure covering many aspects of the properties and performances of the appliance. It is therefore important that the requirements for noise measurements (such as test environment, instrumentation, and amount of labour involved) be kept at a modest level.

The results of noise measurements are used for many purposes, for example for noise declaration, as well as for comparing the noise emitted by a specific appliance to the noise emitted by other appliances of the same family. In other cases, the results are taken as a basis for engineering action in the development stages of new pieces of equipment, or in deciding on means for sound insulation. For all purposes, it is important to specify procedures with known accuracy so that the results of measurements taken by different laboratories can be compared.

These conditions have, as far as possible, been taken into account in the preparation of this test code. The acoustic measuring methods are based on those described in ISO 3743-1:2010, ISO 3743-2:2018 and ISO 3744:2010.

The adoption of these methods permits the use of hemi-anechoic rooms, special reverberation test rooms and hard-walled test rooms. The result of the measurements is the sound power level of the appliance. Within the measuring uncertainty specific to these methods, the results from the determination under free field conditions over a reflecting plane are equal to those obtained in reverberant fields.

The use of intensity methods as described in ISO 9614-1:1993, ISO 9614-2:1996, and ISO 9614-3:2002 is applicable under special conditions, which are described in specific parts of the IEC 60704-2 series.

This test code is concerned with airborne noise only. In some cases, structure-borne noise, for example transmitted to the adjoining room, can be of importance.

INTRODUCTION to IEC 60704-2-10:2024

The measuring conditions specified in this document provide for sufficient accuracy in determining the noise emitted and comparing the results of measurements taken by different laboratories, whilst simulating as far as possible the practical use of ranges, ovens, steam ovens, grills and microwave ovens.

It is recommended to consider the determination of noise levels as part of a comprehensive testing procedure covering many aspects of the properties and performance of household appliances.

NOTE As stated in the Introduction to IEC 60704-1, this test code is concerned with airborne noise only.

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – TEST CODE FOR THE DETERMINATION OF AIRBORNE ACOUSTICAL NOISE –

Part 2-10: Particular requirements for ranges, ovens, steam ovens, grills and microwave ovens

1 Scope

This part of IEC 60704 applies to electric appliances (including their accessories or components) for household and similar use, supplied from mains or from batteries.

By "similar use" is understood the use in conditions similar to those found in households, for example in inns, coffee houses, tea rooms, hotels, barber or hairdresser shops, laundrettes, etc., if not otherwise specified in the IEC 60704-2 series.

This document does not apply to

- appliances, equipment, or machines designed exclusively for industrial or professional purposes;
- appliances that are integrated parts of a building or its installations, such as equipment for air conditioning, heating and ventilating (except household fans, cooker hoods, free-standing heating appliances, dehumidifiers, air cleaners, and stand-alone water heaters), oil burners for central heating, pumps for water supply and for sewage systems;
- separate motors or generators and
- appliances exclusively for outdoor use.

For determining and verifying noise emission values declared in product specifications, see IEC 60704-3:2019.

These particular requirements apply to ranges, ovens, steam ovens, **grills** and microwave ovens for household and similar use.

This document does not apply to hobs.

This document does not apply to appliances or parts of appliances that use gas energy.

Requirements for the declaration of noise emission values are not within the scope of this document.

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 60350-1:2023, *Household electric cooking appliances – Part 1: Ranges, ovens, steam ovens and grills – Methods for measuring performance*

IEC 60704-2 (all parts), *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise*

IEC 60704-3:2019, *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise – Part 3: Procedure for determining and verifying declared noise emission values*

IEC 60705:–1, *Household microwave ovens – Methods for measuring performance*

IEC 61260-1:2014, *Electroacoustics – Octave-band and fractional-octave-band filters – Part 1: Specifications*

IEC 61672-1:2013, *Electroacoustics – Sound level meters – Part 1: Specifications*

ISO 3743-1:2010, *Acoustics – Determination of sound power levels of noise sources – Engineering methods for small, movable sources in reverberant fields – Part 1: Comparison method for hard-walled test rooms*

ISO 3743-2:2018, *Acoustics – Determination of sound power levels of noise sources using sound pressure – Engineering methods for small, movable sources in reverberant fields – Part 2: Methods for special reverberation test rooms*

ISO 3744:2010, *Acoustics – Determination of sound power levels of noise sources using sound pressure – Engineering method in an essentially free field over a reflecting plane*

ISO 9614-1:1993, *Acoustics – Determination of sound power levels of noise sources using sound intensity – Part 1: Measurement at discrete points*

ISO 9614-2:1996, *Acoustics – Determination of sound power levels of noise sources using sound intensity – Part 2: Measurement by scanning*

ISO 9614-3:2002, *Acoustics – Determination of sound power levels of noise sources using sound intensity – Part 3: Precision method for measurement by scanning*

ISO 6926:2016, *Acoustics – Requirements for the performance and calibration of reference sound sources used for the determination of sound power levels*

ISO 12001:1996, *Acoustics – Noise emitted by machinery and equipment – Rules for the drafting and presentation of a noise test code*

¹ Under preparation. Stage at the time of publication: IEC FDIS 60705:2024.

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Household and similar electrical appliances – Test code for the determination of airborne acoustical noise –

Part 2-10: Particular requirements for ranges, ovens, steam ovens, grills and microwave ovens

Appareils électrodomestiques et analogues – Code d'essai pour la détermination du bruit aérien –

Partie 2-10: Exigences particulières pour les cuisinières, les fours, les fours à vapeur, les grils et les fours à micro-ondes

CONTENTS

FOREWORD.....	3
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references	7
3 Terms and definitions	7
4 Measurement methods and acoustical environments	8
5 Instrumentation.....	9
5.1 Instrumentation for measuring acoustical data	9
6 Operation and location of appliance under test	10
6.1 Equipping and pre-conditioning of appliances	10
6.2 Supply of electrical energy and of water or gas	10
7 Measurement of sound pressure levels.....	12
9 Information to be recorded.....	12
10 Information to be reported	12
Annex A.....	13
Table 1 – Standard deviations of sound power levels.....	9
Table 2 – Standard deviations for declaration and verification.....	9
Table 101 – Settings and measurement time	11

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES –
TEST CODE FOR THE DETERMINATION
OF AIRBORNE ACOUSTICAL NOISE –****Part 2-10: Particular requirements for ranges,
ovens, steam ovens, grills and microwave ovens**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at <https://patents.iec.ch>. IEC shall not be held responsible for identifying any or all such patent rights.

IEC 60704-2-10 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. It is an International Standard.

This third edition cancels and replaces the second edition published in 2011. This edition constitutes a technical revision.

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

- a) alignment with the fourth edition of IEC 60704-1:2021;
- b) alignment with IEC 60350-1:2023 regarding the definitions and settings;
- c) introduction of the measurement of the steam function;
- d) revision of settings and test parameters.

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

Draft	Report on voting
59K/396/FDIS	59K/398/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

This document is intended to be used in conjunction with IEC 60704-1:2021, *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise – Part 1: General requirements*.

The relevant text of IEC 60704-1:2021 as amended by this publication establishes the test code ranges, ovens, steam ovens, grills and microwave ovens.

This document supplements or modifies the corresponding clauses in IEC 60704-1:2021. When a particular subclause of IEC 60704-1:2021 is not mentioned in this document, that subclause is applicable as far as reasonable. Where this document states "addition", "modification" or "replacement", the relevant requirements, test specifications or explanatory matter in IEC 60704-1:2021 are to be adapted accordingly.

Subclauses, tables and figures that are numbered starting from 101 are additional to those in IEC 60704-1:2021. Additional annexes are lettered AA, BB, etc.

Unless notes are in a new subclause or involve notes in IEC 60704-1:2021, they are numbered starting from 101, including those in a replaced clause or subclause.

In this standard, the following print types are used:

- terms defined in Clause 3: bold type.

A list of all parts in the IEC 60704 series, published under the general title *Household and similar electrical appliances – Test code for the determination of airborne acoustical noise*, can be found on the IEC website.

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

- reconfirmed,
- withdrawn, or
- revised.

INTRODUCTION

The measuring conditions specified in this document provide for sufficient accuracy in determining the noise emitted and comparing the results of measurements taken by different laboratories, whilst simulating as far as possible the practical use of ranges, ovens, steam ovens, grills and microwave ovens.

It is recommended to consider the determination of noise levels as part of a comprehensive testing procedure covering many aspects of the properties and performance of household appliances.

NOTE As stated in the Introduction to IEC 60704-1, this test code is concerned with airborne noise only.

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – TEST CODE FOR THE DETERMINATION OF AIRBORNE ACOUSTICAL NOISE –

Part 2-10: Particular requirements for ranges, ovens, steam ovens, grills and microwave ovens

1 Scope

Addition:

These particular requirements apply to ranges, ovens, steam ovens, **grills** and microwave ovens for household and similar use.

This document does not apply to hobs.

This document does not apply to appliances or parts of appliances that use gas energy.

Requirements for the declaration of noise emission values are not within the scope of this document.

2 Normative references

Addition:

IEC 60350-1:2023, *Household electric cooking appliances – Part 1: Ranges, ovens, steam ovens and grills – Methods for measuring performance*

IEC 60705:–¹, *Household microwave ovens – Methods for measuring performance*

¹ Under preparation. Stage at the time of publication: IEC FDIS 60705:2024.

SOMMAIRE

AVANT-PROPOS	15
INTRODUCTION.....	18
1 Domaine d'application	19
2 Références normatives	19
3 Termes et définitions	19
4 Méthodes de mesure et environnements acoustiques	21
5 Appareillage	22
5.1 Appareillage pour la mesure des données acoustiques	22
6 Fonctionnement et emplacement des appareils en essai	22
6.1 Équipement et conditionnement préalable des appareils	22
6.2 Alimentation en énergie électrique et en eau ou gaz	22
7 Mesure des niveaux de pression acoustique.....	25
9 Informations à relever.....	25
10 Informations à consigner	25
Annexe A.....	26
Tableau 1 – Écarts-types des niveaux de puissance acoustique	21
Tableau 2 – Écarts-types pour la déclaration et la vérification.....	21
Tableau 101 – Réglages et durée de mesure.....	24

COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

APPAREILS ÉLECTRODOMESTIQUES ET ANALOGUES – CODE D'ESSAI POUR LA DÉTERMINATION DU BRUIT AÉRIEN –

Partie 2-10: Exigences particulières pour les cuisinières, les fours, les fours à vapeur, les grils et les fours à micro-ondes

AVANT-PROPOS

- 1) La Commission Électrotechnique Internationale (IEC) est une organisation mondiale de normalisation composée de l'ensemble des comités électrotechniques nationaux (Comités nationaux de l'IEC). L'IEC a pour objet de favoriser la coopération internationale pour toutes les questions de normalisation dans les domaines de l'électricité et de l'électronique. À cet effet, l'IEC – entre autres activités – publie des Normes internationales, des Spécifications techniques, des Rapports techniques, des Spécifications accessibles au public (PAS) et des Guides (ci-après dénommés "Publication(s) de l'IEC"). Leur élaboration est confiée à des comités d'études, aux travaux desquels tout Comité national intéressé par le sujet traité peut participer. Les organisations internationales, gouvernementales et non gouvernementales, en liaison avec l'IEC, participent également aux travaux. L'IEC collabore étroitement avec l'Organisation Internationale de Normalisation (ISO), selon des conditions fixées par accord entre les deux organisations.
- 2) Les décisions ou accords officiels de l'IEC concernant les questions techniques représentent, dans la mesure du possible, un accord international sur les sujets étudiés, étant donné que les Comités nationaux de l'IEC intéressés sont représentés dans chaque comité d'études.
- 3) Les Publications de l'IEC se présentent sous la forme de recommandations internationales et sont agréées comme telles par les Comités nationaux de l'IEC. Tous les efforts raisonnables sont entrepris afin que l'IEC s'assure de l'exactitude du contenu technique de ses publications; l'IEC ne peut pas être tenue responsable de l'éventuelle mauvaise utilisation ou interprétation qui en est faite par un quelconque utilisateur final.
- 4) Dans le but d'encourager l'uniformité internationale, les Comités nationaux de l'IEC s'engagent, dans toute la mesure possible, à appliquer de façon transparente les Publications de l'IEC dans leurs publications nationales et régionales. Toutes divergences entre toutes Publications de l'IEC et toutes publications nationales ou régionales correspondantes doivent être indiquées en termes clairs dans ces dernières.
- 5) L'IEC elle-même ne fournit aucune attestation de conformité. Des organismes de certification indépendants fournissent des services d'évaluation de conformité et, dans certains secteurs, accèdent aux marques de conformité de l'IEC. L'IEC n'est responsable d'aucun des services effectués par les organismes de certification indépendants.
- 6) Tous les utilisateurs doivent s'assurer qu'ils sont en possession de la dernière édition de cette publication.
- 7) Aucune responsabilité ne doit être imputée à l'IEC, à ses administrateurs, employés, auxiliaires ou mandataires, y compris ses experts particuliers et les membres de ses comités d'études et des Comités nationaux de l'IEC, pour tout préjudice causé en cas de dommages corporels et matériels, ou de tout autre dommage de quelque nature que ce soit, directe ou indirecte, ou pour supporter les coûts (y compris les frais de justice) et les dépenses découlant de la publication ou de l'utilisation de cette Publication de l'IEC ou de toute autre Publication de l'IEC, ou au crédit qui lui est accordé.
- 8) L'attention est attirée sur les références normatives citées dans cette publication. L'utilisation de publications référencées est obligatoire pour une application correcte de la présente publication.
- 9) L'IEC attire l'attention sur le fait que la mise en application du présent document peut entraîner l'utilisation d'un ou de plusieurs brevets. L'IEC ne prend pas position quant à la preuve, à la validité et à l'applicabilité de tout droit de brevet revendiqué à cet égard. À la date de publication du présent document, l'IEC n'a pas reçu notification qu'un ou plusieurs brevets pouvaient être nécessaires à sa mise en application. Toutefois, il y a lieu d'avertir les responsables de la mise en application du présent document que des informations plus récentes sont susceptibles de figurer dans la base de données de brevets, disponible à l'adresse <https://patents.iec.ch>. L'IEC ne saurait être tenue pour responsable de ne pas avoir identifié de tels droits de brevets.

L'IEC 60704-2-10 a été établie par le sous-comité 59K: Aptitude à la fonction des appareils électrodomestiques et similaires de cuisson électrique, du comité d'études 59 de l'IEC: Aptitude à la fonction des appareils électrodomestiques et analogues. Il s'agit d'une Norme internationale.

Cette troisième édition annule et remplace la deuxième édition parue en 2011. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

- a) alignement sur la quatrième édition de l'IEC 60704-1:2021;
- b) alignement sur l'IEC 60350-1:2023 en ce qui concerne les définitions et les réglages;
- c) introduction du mesurage de la fonction de vapeur;
- d) révision des réglages et des paramètres d'essai.

Le texte de cette Norme internationale est issu des documents suivants:

Projet	Rapport de vote
59K/396/FDIS	59K/398/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à son approbation.

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2, il a été développé selon les Directives ISO/IEC, Partie 1 et les Directives ISO/IEC, Supplément IEC, disponibles sous www.iec.ch/members_experts/refdocs. Les principaux types de documents développés par l'IEC sont décrits plus en détail sous www.iec.ch/publications.

Le présent document est destiné à être utilisé conjointement avec l'IEC 60704-1:2021, *Appareils électrodomestiques et analogues – Code d'essai pour la détermination du bruit aérien – Partie 1: Exigences générales*.

Le texte correspondant de l'IEC 60704-1:2021 modifié par la présente publication établit le code d'essai pour les cuisinières, fours, fours à vapeur, grills et fours à micro-ondes.

Le présent document complète ou modifie les articles correspondants de l'IEC 60704-1:2021. Lorsqu'un paragraphe particulier de l'IEC 60704-1:2021 n'est pas mentionné dans le présent document, ce paragraphe s'applique pour autant que cela soit raisonnable. Lorsque le présent document mentionne "addition", "modification" ou "remplacement", les exigences, modalités d'essai ou commentaires correspondants de l'IEC 60704-1:2021 doivent être adaptés en conséquence.

Les paragraphes, tableaux et figures qui s'ajoutent à ceux de l'IEC 60704-1:2021 sont numérotés à partir de 101. Les annexes complémentaires sont désignées AA, BB, etc.

À l'exception de celles qui sont dans un nouveau paragraphe ou de celles qui concernent des notes de l'IEC 60704-1:2021, les notes sont numérotées à partir de 101, y compris celles des articles ou paragraphes qui sont remplacés.

Dans la présente norme, les caractères d'imprimerie suivants sont utilisés:

- termes définis à l'Article 3: caractères gras.

Une liste de toutes les parties de la série IEC 60704, publiées sous le titre général *Appareils électrodomestiques et analogues – Code d'essai pour la détermination du bruit aérien*, se trouve sur le site web de l'IEC.

Le comité a décidé que le contenu de ce document ne sera pas modifié avant la date de stabilité indiquée sur le site web de l'IEC sous webstore.iec.ch dans les données relatives au document recherché. À cette date, le document sera

- reconduit,
- supprimé, ou
- révisé.

INTRODUCTION

Les conditions de mesure spécifiées dans le présent document donnent une exactitude suffisante pour déterminer le bruit émis et comparer les résultats des mesurages réalisés par différents laboratoires, tout en s'approchant autant que possible de l'utilisation pratique des cuisinières, fours, fours à vapeur, grils et fours à micro-ondes.

Il est recommandé de considérer la détermination des niveaux de bruit comme faisant partie d'une procédure d'essai globale qui couvre de nombreux aspects des propriétés et de l'aptitude à la fonction des appareils domestiques.

NOTE Comme indiqué dans l'introduction de l'IEC 60704-1, le présent code d'essai concerne uniquement le bruit aérien.

APPAREILS ÉLECTRODOMESTIQUES ET ANALOGUES – CODE D'ESSAI POUR LA DÉTERMINATION DU BRUIT AÉRIEN –

Partie 2-10: Exigences particulières pour les cuisinières, les fours, les fours à vapeur, les grils et les fours à micro-ondes

1 Domaine d'application

Addition:

Les présentes exigences particulières s'appliquent aux cuisinières, fours, fours à vapeur, **grils** et fours à micro-ondes pour usages domestiques et analogues.

Le présent document ne s'applique pas aux tables de cuisson.

Le présent document ne s'applique pas aux appareils ou parties d'appareils qui fonctionnent au gaz.

Les exigences relatives à la déclaration des valeurs d'émission sonore n'entrent pas dans le domaine d'application du présent document.

2 Références normatives

Addition:

IEC 60350-1:2023, *Appareils de cuisson électrodomestiques – Partie 1: Cuisinières, fours, fours à vapeur et grils – Méthodes de mesure de l'aptitude à la fonction*

IEC 60705:–¹, *Fours à micro-ondes à usage domestique - Méthodes de mesure de l'aptitude à la fonction*

¹ En cours d'élaboration. Stade au moment de la publication: IEC FDIS 60705:2024.