IEC 60705

Edition 5.0 2024-11

INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Household microwave ovens – Methods for measuring performance

Fours à micro-ondes à usage domestique – Méthodes de mesure de l'aptitude à la fonction

IEC 60705:2024-11(en-fr)

IEC Secretariat
3, rue de Varembé
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

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CONTENTS

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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.
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IEC 60705 has been prepared by subcommittee 59K: Performance of household and similar cooking appliances, of IEC technical committee 59: Performance of household and similar electrical appliances. It is an International Standard.

This fifth edition cancels and replaces the fourth edition published in 2010, Amendment 1: 2014 and Amendment 2: 2018. This edition constitutes a technical revision.

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

a) thematically ordered new sequence of the clauses;
b) updated normative references;
c) introduced a new definition for microwave generator to open the standard for microwave ovens with one or more magnetrons or solid-state components;
d) aligned with IEC 60350-1:2023 regarding the definitions and references;

e) aligned preparation of water load for Clause 8 and Clause 10;
f) removed the definitions for set to off mode and set to standby mode ;
g) added new definitions regarding low power modes;
h) aligned the low power mode measurement, Clause 11, to IEC 60350-1:2023;
i) revised square tank tests to one new 12.2;
j) revised the dishes used for Clause 12, Clause 13 and Clause 14 and removal of Annex B;
k) removed A.3.3;
l) removed Annex F for measuring the energy consumption of the cooling down period;
m) former Annex E will be substituted by a supporting document located on the IEC's website.

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

Draft	Report on voting
59K/400/FDIS	59K/404/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.

Words in **bold** in the text are defined in Clause 3.

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.

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HOUSEHOLD MICROWAVE OVENS – METHODS FOR MEASURING PERFORMANCE

1 Scope

This document applies to **microwave ovens** for household and similar use, it also applies to **microwave ovens with grills** and **combination microwave ovens**.

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

The manufacturer defines the primary cooking function of the appliance, **microwave function** or thermal heat. The primary cooking function will be measured with an existing method according to energy consumption.

If the primary cooking function is declared as a **microwave function**, IEC 60705 will be applied for energy consumption measurement. If the primary cooking function is declared as a thermal heat, IEC 60350-1 will be applied for energy consumption measurement. If the manufacturer does not declare the primary function, the performance of the **microwave function** and thermal heat is measured as far as it is possible.

NOTE 1 There is currently no measurement method for the energy consumption for grilling and steam functions.

NOTE 2 This document does not deal with safety requirements (see IEC 60335-2-25 [1][1]).

NOTE 3 This document does not apply to appliances incorporating thermal heat, steam function or hot steam function only. These appliances are covered by IEC 60350-1.

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

ISO 80000-1:2022, *Quantities and units – Part 1: General*

[1] Numbers in square brackets refer to the Bibliography.