

TECHNICAL REPORT

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Second edition
2003-05

Household electrical appliances – Guidelines for consumer panel testing

*Appareils électrodomestiques –
Guide pour les essais avec utilisateurs*

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HOUSEHOLD ELECTRICAL APPLIANCES –
GUIDELINES FOR CONSUMER PANEL TESTING**

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The 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 61592, which is a technical report, has been prepared by IEC technical committee 59: Performance of household electrical appliances.

This second edition cancels and replaces the first edition published in 1996. It constitutes a revision mainly concerning ease of handling and needs of older persons and people with disabilities (ISO/IEC Guide 71).

The text of this technical report is based on the following documents:

Enquiry draft	Report on voting
59/294/DTR	59/321/RVC

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

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

The committee has decided that the contents of this publication will remain unchanged until 2006. At this date, the publication will be

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- withdrawn;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

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INTRODUCTION

Panel testing can be an important tool both for overall as well as partial evaluation of products, since the results directly reflect practical aspects which are of interest to the user. Panel testing should be used to complement technical tests and physical measurements, if any, which are often more abstract for the consumer.

In general, panel testing can be used when

- technical tests are not considered sufficiently;
- an assessment of overall performance is needed;
- characteristics requiring a degree of human involvement have to be evaluated (e.g. handling, cleaning, ergonomic, instructions for use).

These guidelines are to be used as a checklist in determining when and how to apply panel testing and how to avoid the most obvious pitfalls.

Panel testing generally gives information at the time of the test. Comparison is possible with previous or parallel tests only when at least a reference sample and a particular methodology are used.

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HOUSEHOLD ELECTRICAL APPLIANCES – GUIDELINES FOR CONSUMER PANEL TESTING

1 Scope

This Technical Report applies to panel testing of household electrical appliances within the scope of IEC technical committee 59: Performance of household electrical appliances.

NOTE The provisions in this Standard can also be used to evaluate other kind of products.

2 Normative references

The following referenced documents are indispensable for the application 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.

ISO/IEC Guide 14, *Product information for consumers*

ISO/IEC Guide 37, *Instructions for use of products of consumer interest*

ISO/IEC Guide 46, *Comparative testing of consumer products and related services – General principles*

ISO/IEC Guide 71, *Guidelines for standards developers to address the needs of older persons and persons with disabilities*

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ISO 8317, *Child-resistant packaging – Requirements and testing procedures for reclosable packages*

3 Definitions

For the purposes of this document, the following definition applies:

3.1

panel testing

method of assessing aspects of a product, by means of a selected group of people who are asked to evaluate selected or overall aspects of the product

NOTE 1 Examples of such aspects are: function(s), handling, noise, cleaning and instructions for use.

NOTE 2 A list of aspects that can be evaluated by panel testing is given for information in Annex A.

4 Criteria

4.1 Purpose of panel testing

Panel testing is easier when the panel can compare products. In any case, the purpose of the type of panel test to be performed (comparative testing, evaluation of only one product type, evaluation of experimental designs, etc.) and the statistical method to be used have to be stated before starting any panel testing.

For reasons of continuity, to allow a better evaluation of the evolution of products, it may be useful to include as reference for the actual panel testing products tested by a previous panel.

Since panel testing can be used for overall as well as for partial evaluation, data analysis of the results is possible with significant results only when the statistical method has been chosen before the panel testing is performed. This allows for optimisation of panel size and costs.

Statistical methods require a predetermination of the hypothesis and then checking it by panel testing.

4.2 Panel testing leadership

The carrying out of panel testing and the reliability of the test results largely depend on the panel test leadership.

The panel test leader shall set up the panel test. Specifically he shall take care of the composition and characteristics of the panel, training of panel members (when necessary) and the test results evaluation system.

Panel testing should be directed by (a) qualified person(s) who should be competent in the fields listed below, either by direct experience or by consulting outside experts if needed:

- knowledge of all the relevant panel testing and statistical methods and how to combine them according to circumstances;
- knowledge of how to conduct interviews and how to guide the panel members without influencing them in any way;
- at least basic knowledge of the physiology of the senses, perception and psychology.

The design of the test should consider all the age ranges and the ergonomic features of these ages and consult the assistance of an ergonomist or other experts in preparing the tests.

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The panel testing leader should not be personally involved in the design, production or marketing of the products under evaluation.

4.3 Characteristics of the panel

The composition of the panel and the number of panel members should correspond to the purpose and required significance of the results.

In the selection of the panel membership, the following aspects are to be considered.

- a) The composition of the panel should cover the intended and probable users of the product, taking into account
 - age;
 - sex;
 - physical ability;
 - presence and type of disabilities/handicaps;
 - age impairment (e.g. poor memory, arthritis, etc.);
 - left or right handedness;
 - knowledge, experience and competence;
 - previous acquaintance with, or lack of knowledge about similar products;
 - social/economic categories;
 - level of education and language ability, including intellectual impairments.
- b) In principle panel members should be potential users and their knowledge should not be superior to that of an experienced user.