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Home laundry appliances — Uncertainty reporting of measurements

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National foreword

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The UK participation in its preparation was entrusted by Technical Committee CPL/59, Performance of household electrical appliances, to Subcommittee CPL/59/1, Dishwashers and washing machines.

A list of organizations represented on this committee can be obtained on request to its secretary.

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TECHNICAL REPORT

Home laundry appliances – Uncertainty reporting of measurements

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HOME LAUNDRY APPLIANCES –
UNCERTAINTY REPORTING OF MEASUREMENTS**

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IEC 62617, which is a Technical Report, has been prepared by subcommittee 59D: Performance of household and similar electrical laundry appliances, of IEC technical committee 59: Performance of household and similar electrical appliances.

This second edition cancels and replaces the first edition published in 2010. This edition constitutes a technical revision.

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

- alternative expression of expanded uncertainties in absolute values;
- expanded uncertainty for horizontal drum washing machines according to IEC 60456:2010;

- expanded uncertainties for washer-dryer according to IEC 62512:2012
- clarifications of the examples of expanded uncertainty calculation.

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

Enquiry draft	Report on voting
59D/430/DTR	59D/432/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.

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

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

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- withdrawn,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

A bilingual version of this publication may be issued at a later date.

INTRODUCTION

To encourage the efficient use of energy and other resources, National governments and regional authorities have issued regulations, which mandate the provision of information to consumers regarding the energy and water consumption of household appliances and associated performance characteristics. This information is usually conveyed by labels attached to appliances at the point of sale and also by brochures provided by manufacturers.

Methods for measuring declared values for energy and water consumption and performance characteristics should be of sufficient accuracy to provide confidence to governments, consumers and manufacturers. The accuracy of a test method is expressed in terms of bias and precision. Precision, when evaluating test methods, is expressed in terms of two measurement concepts: repeatability and reproducibility. Therefore, standard procedures should be used for determining the repeatability and the reproducibility of test methods developed by technical committee 59 and its subcommittees. The repeatability of a test method should be sufficiently accurate for comparative testing. The reproducibility of a test method should be sufficiently accurate for the determination of values which are declared and for checking these declared values.

Uncertainty reporting is essential to ensure measured data are interpreted in a correct way. Especially when data of measurements are compared between laboratories or when normative requirements are set up, it is necessary to know the uncertainty with which data can be measured.

HOME LAUNDRY APPLIANCES – UNCERTAINTY REPORTING OF MEASUREMENTS

1 Scope

This Technical Report (TR) applies to uncertainty reporting of measurements of home laundry electrical appliances.

It allows to estimate the uncertainty of a measured result and to predict the range of values that may be measured when the same appliance is measured in another laboratory following the same measurement method.

NOTE The provisions in this TR can also be used to evaluate other kinds of products.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC TR 61923:1997, *Household electrical appliances – Method of measuring performance – Assessment of repeatability and reproducibility*

ISO/IEC Guide 98-3:2008, *Uncertainty of measurement – Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

repeatability conditions

conditions where independent test results are obtained with the same method on identical test items in the same laboratory by the same operator using the same equipment within short intervals of time

[SOURCE: IEC TR 61923:1997, 3.6]

3.2

repeatability standard deviation

standard deviation of test results obtained under **repeatability conditions**

[SOURCE: IEC TR 61923:1997, 3.7]

3.3

reproducibility conditions

conditions where test results are obtained with the same method on identical test items in different laboratories with different operators using different equipment

[SOURCE: IEC TR 61923:1997, 3.9]