

Electric dishwashers for household use - Test methods for measuring the performance - Amendment A3

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EUROPEAN STANDARD

EN 50242/A3

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2003

ICS 97.040.40

English version

Electric dishwashers for household use - Test methods for measuring the performance

Lave-vaisselle électriques pour usage
domestique -
Méthodes d'essai pour la mesure
de l'aptitude à la fonction

Elektrische Geschirrspülmaschinen
für den Hausgebrauch -
Messverfahren für Gebrauchseigenschaften

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This amendment A3 modifies the European Standard EN 50242:1998; it was approved by CENELEC on 2002-12-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

This amendment to the European Standard EN 50242:1998 was prepared by WG 2, Dishwashers, of the Technical Committee CENELEC TC 59X, Consumer information related to household electrical appliances.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as amendment A3 to EN 50242:1998 on 2002-12-01.

The following dates were fixed:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2003-12-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2005-12-01

This amendment comprises

- updates of addresses given in Annexes C and F,
- the introduction of common ambient conditions for washing machines, tumble dryers and dishwashers, according to the decision made by CLC/TC 59X at the meeting in May 2000,
- more precisely specified test conditions to improve the reproducibility of the test procedures. The improvements do not change the test procedures in principle.

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5.5 Ambient conditions

Replace in the third line "(55 ± 10) %" by "(55 ± 5) %".

5.6 Water supply

5.6.3 Hardness

Replace the first paragraph by:

For the operation of the machine under test and the reference machine water of defined composition following IEC 60734, 5.4.1 'Composition of hard water prepared by method C', of (2,5 ± 0,5) mmol/l water hardness shall be used.

5.7 Detergent

Replace the last sentence by:

Before using, the detergent shall be homogenized in accordance with ISO 607 for example using a probe dividing device.

Add at the end:

NOTE For a supplier of a suitable sample dividing device, see Annex F.

Prior to starting a test run, it shall be assured that the detergent dispenser(s) are dry. The detergent is not added to the dispenser until immediately before the start of the test run.

6.1 General

Add at the end of the second paragraph.

For details of preparation, the instructions of the video given in C.1 must be followed.

Delete the note.

6.2 Load

Add at the end:

Dishes, glasses and cutlery without any visible damage of the surface are to be used. It is recommended to use paper between the plates when they are stacked, to prevent scratching.

Before using the pieces for the next test, the scoring of all dishes shall be checked and be rated 5. Pieces not attaining a score of 5 shall be cleaned, by hand, in warm water or using a commercial dishwasher. In either case, the same concentration of reference rinse aid as used in the reference machine shall be used.

The pieces should be used for 200 ± 20 cycles (cleaning, drying, cleaning before soiling, conditioning).

6.3 Soiling agents

Add at the end:

All soiling materials used for the reference machine and for the machine under test shall be from the same batch. It is recommended to ensure that as far as possible the soiling agents are as offered by the supplier given in F.10.

6.4 Preparation and application of soiling agents

Replace the first sentence by:

Unless specifically stated otherwise, all soiling agents are to be prepared afresh for each test cycle and have to be finally prepared and applied to the test items at the date of testing.

6.4.1 Milk

6.4.1.4 Application

Replace the first sentence by:

The milk shall be stored in a refrigerator. It shall be stored for no longer than 5 days after opening. After removal from the refrigerator, the milk shall be shaken thoroughly before each use, for approximately 30 s.

6.4.2 Tea

6.4.2.1 Preparation

Add as new first sentence:

For the preparation of the tea water according to 5.6.3 shall be used.

6.4.2.2 Application

Add as new first sentence of the second paragraph:

The empty cups and saucers are not to be pre-heated in the cabinet.

6.4.4 Egg

6.4.4.1 Preparation

Add as new first sentence:

Egg yolk must be prepared without the skin around it and without any water if water is used for separating the yolk of the egg (preparation shown in the video given in C.1).

6.4.5 Oat flakes

6.4.5.2 Application

Add as new first sentence:

For the preparation of the oat flakes water according to 5.6.3 shall be used.

6.4.7 Margarine

6.4.7.2 Application

Add at the end:

The large platter(s) to be soiled with margarine shall be at ambient temperature prior to testing. The platter is placed into the machine immediately before the start of the test run.

6.5 Drying of the soiled dishes

Add at the end:

The timing of 2 hours starts as soon as the doors of the heating cabinet are closed.

6.6 Loading and operating

6.6.2 *Operating*

Replace the second and the third sentences by:

For this the soiled items have to be unloaded after the oven drying as quickly as possible and have to cool down outside the cabinet for 30 min – 40 min in the climate controlled room (according to 5.5) in which the test is run. During this time, the items shall already be placed inside the baskets, which are placed outside of the dishwasher. Then the machines are loaded within 3 min and the test run is started immediately.

Replace in the second sentence of the second paragraph “may “ by “shall“.

6.7 Evaluation

6.7.1 *Assessing the cleaning*

Add to the NOTE as new first sentence:

Iodine shall not be used to assess the cleaning evaluation of starch soils.

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7.3 Loading and operating

7.3.2 *Operating*

Replace in the second sentence “may “ by “shall“.

7.4 Evaluation

7.4.1 *Assessing the drying*

Add after the first paragraph:

The evaluation shall be carried out directly in front of the test machine, using the defined lamp (not in a “black box”) without moving the dishwasher.

Add after the present second paragraph:

The cutlery shall be evaluated last, after crockery and glassware. To avoid water drops from the upper basket dropping onto the cutlery, before it is evaluated, the cutlery shall be removed from the lower rack, just after all items in the lower basket have been assessed and before pulling out the upper rack, if appropriate.

10 Test report

Replace the complete clause by:

10 Data to be reported

Laboratory:	Identification:
Date:	Test number:
Room temperature [°C]:	Humidity:
Water hardness [mmol/l(Ca+Mg)]:	
Detergent type:	Batch number:
Rinse aid type:	Batch number:
Salt type:	Batch number:
Supply voltage:	
Total cleaning performance (according to 6.8) :	
Total drying performance (according to 7.5):	

	Machine under test	Reference machine
Type	iTeh STANDARD PREVIEW (standards.iteh.ai)	
Serial number	SIST EN 50242:2001/A3:2003	
Program used	https://standards.iteh.ai/catalog/standards/sist/cf3070e4-c639-4486-b886-379b360296ed/sist-en-50242-2001-a3-2003	
Number of place settings		
Name of test cycle		
Amount of detergent [g]		
Rinse aid dosage [ml]		
Water softener adjustment		
Energy consumption [kWh]		
Water consumption [l]		
Time for the cycle [min]		
Maximum water temperature cleaning [°C]		
Maximum water temperature rinsing [°C]		
Cleaning performance		
Drying performance		

B.1 Detergent

Add as first paragraph:

The reference detergent B is defined by specific characteristics which influence the behaviour in the dishwasher, such as oxygen activity, solubility, enzyme activity, particle size distribution, etc. A detailed specification, with tolerances on each value, is available from the supplier.

C.1 Manufacture of the reference machine/supplier of the videotape

Replace the address by:

Miele & Cie GmbH
Attn. Mr. Lothar Wedeking
Carl-Mielestraße 29
D - 33332 GÜTERSLOH

Tel: +49 5241 89 1434
Fax: +49 5241 89 1420
e-mail: lothar.wedeking@miele.de

C.2 Specifications of the reference machine

Add at the end:

Rinse aid dosage [adjustment 2]: 2,5 - 3,0 ml.

The specification of the loading plan, including positioning of the different soils, shall be followed as given in C.3.

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The reference machine shall be checked immediately before starting each series of tests for compliance.

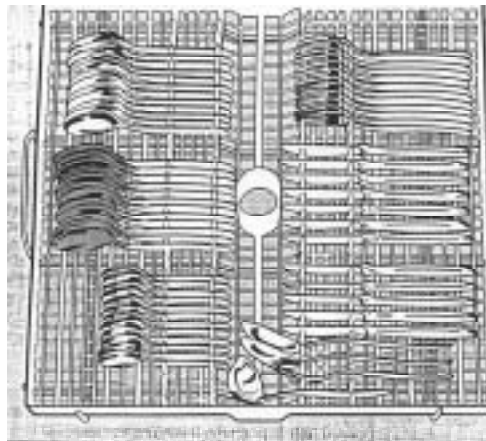
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Add after Clause C.2:

C.3 Specification of the loading plan



Cutlery tray