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Interested committees:

Title: BS EN IEC 60355-2-14 Household and similar electrical appliances - Safety

Part 2-14: Particular requirements for kitchen machines

Please notify the secretary if you are aware of any keywords that might assist in classifying or identifying the standard or if the content of this standard

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- iii) requires additional national guidance or information

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
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Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



PROJET DE COMITÉ POUR VOTE (CDV)

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IEC 60335-2-14 ED7

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DATE DE CLÔTURE DU VOTE:

2024-04-26

REMPLACE LES DOCUMENTS:

61/6771/CDV, 61/6925A/RVC

IEC TC 61 : SÉCURITÉ DES APPAREILS ÉLECTRODOMESTIQUES ET ANALOGUES	
SECRÉTARIAT: United States of America	SECRÉTAIRE: Ms Randi Myers
INTÉRESSE ÉGALEMENT LES COMITÉS SUIVANTS:	NORME HORIZONTALE SUGGÉRÉE: ☐ Il est demandé aux autres TC/SC de faire part, le cas échéant, de leur intérêt pour ce CDV au secrétaire
FONCTIONS CONCERNÉES: ☐ ASSURANCE DE LA QUALITÉ ☐ CEM ☐ ENVIRONNEMENT ☒ SÉCURITÉ	
☐ SOUMIS AU VOTE PARALLÈLE AU CENELEC	☒ NON SOUMIS AU VOTE PARALLÈLE AU CENELEC

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Les destinataires de ce document sont invités à soumettre, avec leurs commentaires, la notification de tous articles pertinents "Dans certains pays" à inclure si cette proposition est acceptée. Il est rappelé aux destinataires que l'étape du CDV est la dernière étape pour la soumission des articles ISC. (VOIR [AC/22/2007](#) OU [NEW GUIDANCE DOC](#)).

TITRE:

Appareils électrodomestiques et analogues - Sécurité - Partie 2-14: Exigences particulières pour les machines de cuisine

DATE DE STABILITÉ PROPOSÉE: 2027

NOTE DES RESPONSABLES DU TC/SC:

This document is circulated according to the decisions taken at the meeting of TC 61 in 2020 Web Series – see 61/6183/RM, 2021 Web Series-I – see 61/6306/RM, 2021 WebSeries-II – 61/6435A/RM, 2022 Web Series-I meetings of TC 61 – see 61/6665/RM, San Francisco – see 61/6755/RM and Venice – see 61/7093/RM

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61/5957/DC and 61/6028A/INF in 61/6183/RM, item 39a
61/5974/DC and 61/6030A/INF in 61/6183/RM, item 39c
61/5976/DC and 61/6032A/INF in 61/6183/RM, item 39e
61/5979/DC and 61/6035A/INF in 61/6183/RM, item 39h
61/6198/DC and 61/6254A/INF in 61/6306/RM, item 13a
61/6222/DC and 61/6255A/INF in 61/6306/RM, item 13b
61/6223/DC and 61/6256A/INF in 61/6306/RM, item 13c
61/6322/DC and 61/6396A/INF in 61/6435A/RM, item 10
61/6454/DC and 61/6588A/INF in 61/6665/RM, item 37b
61/6492/DC and 61/6589A/INF in 61/6665/RM, item 37c
61/6493/DC and 61/6590A/INF in 61/6665/RM, item 37d
61/6660/DC and 61/6691A/INF in 61/6755/RM, item 19
61/6771/CDV and 61/6925A/RVC in 61/7093/RM, item 9a
61/6789/DC and 61/6867A/INF in 61/7093/RM, item 9b
61/6790/DC and 61/6868A/INF in 61/7093/RM, item 9c
61/6817/DC and 61/6869A/INF in 61/7093/RM, item 9d
61/6993/DC and 61/7024B/INF in 61/7093/RM, item 9e

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Note of MT46: This CDV incorporates the following documents:

- 61/6771/CDV with 61/6925A/RVC
- 61/6789/DC with 61/6867A/INF
- 61/6790/DC with 61/6868A/INF
- 61/6993/DC with 61/7024B/INF (Incorporates 61/6817/DC, 61/6869A/INF)
- AG28 Report (Venice)02g, Inquiry 23. US02 (See 11.7.105)

The highlighting to show changes in the first CDV was maintained. The changes from the RVC are noted with green highlight and the additions for the above DC/INF documents are indicated by the font colours as shown above.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-14: Particular requirements for kitchen machines

FOREWORD

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- 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) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

IEC 60335-2-14 has been prepared by IEC technical committee 61: Safety of household and similar electrical appliances. It is an International Standard.

This seventh edition cancels and replaces the sixth edition published in 2016 and Amendment 1:2019. This edition constitutes a technical revision.

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

- Alignment with IEC 60335-1:2020;
- Conversion of some notes to normative test (Clause 1, 3.1.9.111, 3.1.9.112, 3.1.9.114, 3.1.9.115, 11.7.3, 20.2, 20.107, 20.108);
- Modification to replace berry juice extractor with auger juicer and addition of a defined term (Clause 1, 3.1.9.101, 3.5.107, 11.7.102, 19.1, 19.7);
- Addition of requirements for appliances not intended for use by children (Clause 1, 7.12, 20.2, 20.106, 20.117);
- Addition of a reference to IEC 60335-2-15 for combined appliances (Clause 1);

- Modifications to clarify the testing under normal operating conditions (3.1.9, 3.1.9.111, 5.9, 7.12, 10.1, 11.5, 11.6, 11.7, 11.7.1 - 11.7.3, 11.7.101 – 11.7.118);
- Addition of surface temperatures for external accessible surfaces (11.3, 11.8);
- Modification of the spillage test of 15.2 to address leakage from the liquid container;
- Clarification of requirements for remote operation of kitchen machines (11.7, 19.7, 22.40, 22.49, 22.51);
- Modification of the operating period for juicers with respect to the 0,5 kg carrot load and the operating time (11.7.105);
- Clarification of overfill testing with detachable gaskets and addition of gasket leakage test (15.2, 15.102);
- Clarification of the feed opening dimension limits in 20.2;
- Addition of requirements when compliance with the standard relies on an **electronic circuit** for the interlock function (20.2, 20.104, 20.108, 20.113);
- Addition of test probe 18 where test probe B is applied and clarification of forces applied to test probes (20.2, 20.104, 20.106, 20.108, 20.113, 20.114, 20.117);
- Update and combine requirements for inadvertent operation of **hand-held blenders** and knives to cover alternative switch constructions on the market (20.103 and deletion of previous 20.115);
- Clarification of the test of 20.104;
- Update of interlock requirements to be applicable for all appliances where the interlock is required for compliance with the standard (20.113, 20.114);
- Update of the detergent used for centrifugal juicer conditioning (Annex AA).

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

Draft	Report on voting
61/XX/FDIS	61/XX/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/standardsdev/publications.

A list of all parts of the IEC 60335 series, under the general title: Household and similar electrical appliances – Safety, can be found on the IEC website.

This part 2 is to be used in conjunction with the latest edition of IEC 60335-1 and its amendments unless that edition precludes it; in that case, the latest edition that does not preclude it is used. It was established on the basis of the sixth edition (2020) of that standard.

NOTE 1 When "Part 1" is mentioned in this standard, it refers to IEC 60335-1.

This part 2 supplements or modifies the corresponding clauses in IEC 60335-1, so as to convert that publication into the IEC standard: Safety requirements for electric kitchen machines.

When a particular subclause of Part 1 is not mentioned in this part 2, that subclause applies as far as is reasonable. When this standard states "addition", "modification" or "replacement", the relevant text in Part 1 is to be adapted accordingly.

NOTE 2 The following numbering system is used:

- subclauses, tables and figures that are numbered starting from 101 are additional to those in Part 1;
- unless notes are in a new subclause or involve notes in Part 1, they are numbered starting from 101, including those in a replaced clause or subclause;
- additional annexes are lettered AA, BB, etc.

NOTE 3 The following print types are used:

- requirements: in roman type;
- *test specifications: in italic type*;
- notes: in small roman type.

Words in **bold** in the text are defined in Clause 3. When a definition concerns an adjective, the adjective and the associated noun are also in bold.

The committee has decided that the contents of this publication and its amendment 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.

The National Committees are requested to note that for this publication the stability date is 2027.

THIS TEXT IS INCLUDED FOR THE INFORMATION OF THE NATIONAL COMMITTEES AND WILL BE DELETED AT THE PUBLICATION STAGE.

NOTE 4 The attention of National Committees is drawn to the fact that equipment manufacturers and testing organizations may need a transitional period following publication of a new, amended or revised IEC publication in which to make products in accordance with the new requirements and to equip themselves for conducting new or revised tests.

It is the recommendation of the committee that the content of this publication be adopted for implementation nationally not earlier than 12 months or later than 36 months from the date of publication.

INTRODUCTION

It has been assumed in the drafting of this International Standard that the execution of its provisions is entrusted to appropriately qualified and experienced persons.

Guidance documents concerning the application of the safety requirements for appliances can be accessed via TC 61 supporting documents on the IEC website

<https://www.iec.ch/tc61/supportingdocuments>

This information is given for the convenience of users of this International Standard and does not constitute a replacement for the normative text in this standard.

This standard recognizes the internationally accepted level of protection against hazards such as electrical, mechanical, thermal, fire and radiation of appliances when operated as in normal use taking into account the manufacturer's instructions. It also covers abnormal situations that can be expected in practice and takes into account the way in which electromagnetic phenomena can affect the safe operation of appliances.

This standard takes into account the requirements of IEC 60364 as far as possible so that there is compatibility with the wiring rules when the appliance is connected to the supply mains. However, national wiring rules may differ.

If an appliance within the scope of this standard also incorporates functions that are covered by another part 2 of IEC 60335, the relevant part 2 is applied to each function separately, as far as is reasonable. If applicable, the influence of one function on the other is taken into account.

When a part 2 standard does not include additional requirements to cover hazards dealt with in Part 1, Part 1 applies.

NOTE 1 This means that the technical committees responsible for the part 2 standards have determined that it is not necessary to specify particular requirements for the appliance in question over and above the general requirements.

This standard is a product family standard dealing with the safety of appliances and takes precedence over horizontal and generic standards covering the same subject.

NOTE 2 Horizontal publications, basic safety publications and group safety publications covering a hazard are not applicable since they have been taken into consideration when developing the general and particular requirements for the IEC 60335 series of standards.

An appliance that complies with the text of this standard will not necessarily be considered to comply with the safety principles of the standard if, when examined and tested, it is found to have other features that impair the level of safety covered by these requirements.

An appliance employing materials or having forms of construction differing from those detailed in the requirements of this standard may be examined and tested according to the intent of the requirements and, if found to be substantially equivalent, may be considered to comply with the standard.

NOTE 3 Standards dealing with non-safety aspects of household appliances are:

- IEC standards published by TC 59 concerning methods of measuring performance;
- CISPR 11, CISPR 14-1 and relevant IEC 61000-3 series standards concerning electromagnetic emissions;
- CISPR 14-2 concerning electromagnetic immunity;
- IEC standards published by TC 111 concerning environmental matters.

HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY –

Part 2-14: Particular requirements for kitchen machines

1 Scope

This clause of Part 1 is replaced with the following.

This part of IEC 60335 deals with the safety of electric kitchen machines for household and similar purposes, their **rated voltage** being not more than 250 V including direct current (DC) supplied appliances and **battery-operated appliances**.

Examples of appliances that are within the scope of this standard are

- bean slicers;
- **auger juicers;**
- **blenders;**
- can openers;
- centrifugal juicers;
- churns;
- citrus-fruit squeezers;
- coffee mills not exceeding 500 g hopper capacity;
- cream whippers;
- egg beaters;
- **food mixers;**
- **food processors;**
- grain grinders not exceeding 3 l hopper capacity;
- graters;
- ice-cream machines, including those for use in refrigerators and freezers;
- knife sharpeners;
- knives;
- **mincers;**
- **noodle makers;**
- peelers;
- shredders;
- sieving machines;
- slicing machines.

Appliances intended for normal household and similar use and that can also be used by laymen in shops, in light industry, **bed and breakfast** and on farms, are within the scope of this standard. However, if the appliance is intended to be used professionally to process food for commercial consumption, the appliance is not considered to be for household and similar use only.

As far as is practicable, this standard deals with the common hazards presented by appliances which are encountered by all persons in and around the home. However, in general, it does not take into account

- persons (including children) whose
 - physical, sensory or mental capabilities; or
 - lack of experience and knowledgeprevents them from using the appliance safely without supervision or instruction;
- children playing with the appliance.

It does not take into account the use of the following appliances by children:

- bean slicers;
- **blenders including hand-held blenders;**
- juicers other than citrus-fruit squeezers;
- **food mixers;**
- **food processors;**
- knives;
- **mincers;**
- **noodle makers;**
- lathe-type or **hand-held peelers;**
- vegetable graters/shredders;
- slicing machines.

Combined appliances that incorporate within the same container both the functions of a kitchen machine and an appliance for heating liquids are covered by IEC 60335-2-15 with the relevant requirements of this standard.

Attention is drawn to the fact that

- for appliances intended to be used in vehicles or on board ships or aircraft, additional requirements can be necessary;
- in many countries additional requirements are specified by the national health authorities, the national authorities responsible for the protection of labour and similar authorities.

This standard does not apply to

- slicing machines having a circular knife the blade of which is inclined at an angle exceeding 45° to the vertical;
- **soy milk makers (IEC 60335-2-15);**
- food waste disposers (IEC 60335-2-16);
- ice-cream appliances with incorporated motor compressors (IEC 60335-2-24);
- kitchen machines intended for commercial purposes (IEC 60335-2-64);
- kitchen machines intended for industrial purposes;
- kitchen machines intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas).

2 Normative references

This clause of Part 1 is applicable except as follows.

Addition:

IEC 60584-1, Thermocouples - Part 1: EMF specifications and tolerances

298 IEC 60811-504:2012, *Electric and optical fibre cables – Test methods for non-metallic materials*
299 – *Part 504: Mechanical tests – Bending tests at low temperature for insulation and sheaths*

300 IEC 60811-505:2012, *Electric and optical fibre cables – Test methods for non-metallic materials*
301 – *Part 505: Mechanical tests – Elongation at low temperature for insulations and sheaths*

302 **3 Terms and definitions**

303 This clause of Part 1 is applicable except as follows.

304 **3.1 Definitions relating to physical characteristics**

305 **3.1.9 *Modification*:**

306 **Replace the first paragraph with the following:**

307 operation of the appliance under the conditions specified in 3.1.9.101 to 3.1.9.119 and operation
308 with the most unfavourable load indicated in the instructions. ~~If the conditions are not specified,~~
309 ~~the appliance is operated with the most unfavourable load indicated in the instructions.~~
310 However, operation per the instructions is not necessary for appliances operated without load
311 in accordance with 3.1.9.119.

312 **Note 101 to entry:** A guidance document concerning the application of 3.1.9, Clause 10 and Clause 11 can be accessed via
313 TC 61 supporting documents on the IEC website.

314 **3.1.9.101 *Auger juicers*** are fed with 1 kg of berries, such as currants, gooseberries or grapes.
315 Pushers are pressed with a force of 5 N against the berries.

316 **3.1.9.102 *Food blenders*** are operated with the bowl filled to its maximum indicated level with
317 a mixture comprising two parts by mass of soaked carrots and three parts water. If this level is
318 not indicated, the bowl is filled to two-thirds of its total capacity. The carrots are soaked in water
319 for 24 h and cut so that the dimensions of the pieces do not exceed 15 mm. If the bowl is not
320 provided, a cylindrical bowl is used which has a capacity of approximately 1 l and an inner
321 diameter of approximately 110 mm.

322 **Liquid blenders** are operated with water instead of the mixture.

323 **3.1.9.103** Can openers are operated with cans of tinned steel having a diameter of
324 approximately 100 mm.

325 **3.1.9.104** Juicers are operated with carrots that have been soaked in water for approximately
326 24 h. 5 kg of soaked carrots are gradually fed into juicers having separate outlets for the juice
327 and residue. Other juicers are fed with batches of 0,5 kg of carrots, unless otherwise indicated
328 in the instructions. Pushers are pressed with a force of 5 N against the carrots.

329 **3.1.9.105** Cheese graters are operated with a 250 g piece of hard Parmesan cheese selected
330 from a block of cheese about 16 months old and which has at least one plane surface. A force
331 of 10 N is applied to the cheese unless the force is applied automatically.

332 **3.1.9.106** Churns are filled with a mixture of eight parts by mass of heavy cream and one part
333 of buttermilk. The quantity of the mixture is the maximum that allows the churn to operate
334 without spillage.

335 **3.1.9.107** Citrus-fruit squeezers are operated with orange halves pressed against the reamer
336 with a force of 50 N.

3.1.9.108 Coffee mills having a separate container for collecting the ground coffee are operated with the hopper filled with roasted coffee beans.

Other coffee mills are operated with the hopper filled with the maximum quantity of roasted coffee beans stated in the instructions.

Note 1 to entry: If necessary, the coffee beans are conditioned for 24 h at a temperature of $30\text{ °C} \pm 2\text{ °C}$ and a relative humidity of $60\% \pm 2\%$.

Controls are set to the position resulting in the smallest grain size.

3.1.9.109 Cream whippers and egg beaters are operated in water with 80 % of the length of the effective part immersed in a bowl of water.

3.1.9.110 Food mixers with beaters for mixing cake batter are operated with the beater blades as close as possible to the bottom of a bowl containing dry sand having a grain size between $170\text{ }\mu\text{m}$ and $250\text{ }\mu\text{m}$. The height of the sand in the bowl is approximately 80 % of the length of the effective part of the beater.

Food mixers with kneaders for mixing yeast dough are operated with the kneaders in a bowl filled with a mixture of flour and water.

Note 1 to entry: The flour has a protein content of $10\% \pm 1\%$, based on a negligible water content of the flour and without chemical additives.

Note 2 to entry: In case of doubt, the flour is more than two weeks but less than four months old. It is stored in plastic bags with as little air as possible.

The bowl is filled with a mass of flour in grams equal to 35 % of its capacity in cm^3 , 72 g of water at a temperature of $25\text{ °C} \pm 1\text{ °C}$ being added for each 100 g of flour.

Note 3 to entry: In case of doubt, the quantity of water is 1,2 times that necessary for the consistency of the mixture to be 500 Brabender units at $29\text{ °C} \pm 1\text{ °C}$, measured using a farinograph.

For **hand-held food mixers**, the kneaders are moved in a figure-of-eight movement at a rate of 10 to 15 movements per minute. The kneaders are to touch the wall of the bowl at opposite points and be in contact with the bottom of the bowl. If a bowl is not provided, a bowl is used that has a height of approximately 130 mm and an inner diameter of approximately 170 mm at the top, tapering down to approximately 150 mm at the bottom. Its inner surface is smooth and the wall and bottom blend smoothly.

3.1.9.111 Food processors are operated using the load which results in the most unfavourable conditions as follows:

– If provided with grating, slicing or shredding blades, they are operated as specified for vegetable graters and shredders (3.1.9.118) and cheese graters (3.1.9.105);

– If provided with chopping blades, they are operated with each of the following loads filled to the rated capacity or in the maximum quantity recommended in the instructions, whichever is less:

- raw sinewless, boneless and fatless beef,

- hard Parmesan cheese selected from a block of cheese about 16 months old;

– If provided with mixing blades, they are operated as specified for:

- **food mixers** for mixing cake batter (3.1.9.110) when the food processor is not intended to mix yeast dough. However, the sand is filled to the rated capacity or the maximum quantity recommended in the instructions, whichever is less;

- **food mixers** with kneaders for mixing yeast dough when the food processor is intended to mix yeast dough. However, the setting of the control and quantity of the mixture is the maximum stated in the instructions. If an accessory rotating at high speed is used to prepare the dough, only 60 g of water is used for each 100 g of flour.

383 Note 1 to entry: In case of doubt when using an accessory rotating at high speed, the quantity of water is that
384 necessary for the consistency of the mixture to be 500 Brabender units at $29\text{ °C} \pm 1\text{ °C}$, measured using a farinograph.

385 Note 2 to entry: The maximum quantity of the mixture may be specified by the maximum amount of flour.

386 Food loads are prepared prior to processing as recommended in the instruction manual,
387 including cutting to a specified size, peeling, and chilling in the refrigerator or freezer. If no
388 preparation instructions are provided, the foods are to be cut into pieces as needed to fit within
389 the bowl or feed opening.

390 For a multispeed appliance, if the instructions recommend processing of certain food loads at
391 other than the highest speed, they are to be processed at the recommended speed.

392 **3.1.9.112** Grain grinders are operated with the hopper filled with wheat and controls being set
393 to the position resulting in the smallest grain size. Corn is used instead of wheat when
394 instructions state that it can be ground.

395 Note 1 to entry: If necessary, the wheat is conditioned for 24 h at a temperature of $30\text{ °C} \pm 2\text{ °C}$ and a relative
396 humidity of $60\% \pm 2\%$.

397 **3.1.9.113** Ice-cream machines are operated with a mixture of 60 % water, 30 % sugar, 5 %
398 lemon juice and 5 % beaten egg white by mass. The quantity of the mixture is the maximum
399 stated in the instructions. If there is no stated maximum, the container will be filled up to the
400 maximum capacity.

401 Removable elements for cooling ice cream are pre-cooled for 24 h at $-20\text{ °C} \pm 5\text{ °C}$.

402 For appliances cooled by ice, the cooling container is filled with ice in accordance with the
403 instructions, 200 g of salt being added for each kg of ice.

404 Ice-cream machines for use in refrigerators and freezers are placed on thermal insulating
405 material approximately 20 mm thick. They are operated without load at an ambient temperature
406 of $-4\text{ °C} \pm 1\text{ °C}$.

407 **3.1.9.114** Knives are operated by slicing a length of hard sausage when measuring the power
408 input. The sausage is approximately 55 mm in diameter and cut into slices approximately 5 mm
409 thick, a force of approximately 10 N being applied to the knife. The sausage is stored for at
410 least 4 h at a temperature of $23\text{ °C} \pm 2\text{ °C}$ before slicing.

411 Note 1 to Entry: An example of a hard sausage is salami.

412 For the other tests, knives are operated with the cutting edge of the blade pressed against a
413 length of soft wood having a cross-section approximately 50 mm × 100 mm. A force is gradually
414 applied to the knife until the power input measured when cutting the sausage is obtained.

415 **3.1.9.115** **Mincers** are fed with sinewless, boneless and fatless beef that has been cut into
416 pieces approximately 20 mm × 20 mm × 60 mm. Pushers are pressed with a force of 5 N
417 against the meat.

418 A brake may be used to apply the mean value of the load that is determined by mincing the
419 meat for 2 min.

420 **3.1.9.116** **Noodle makers** without a mixing function are fed with dough prepared from 225 g
421 wheat flour, 1 egg (approximately 55 g), 15 ml cooking oil and 45 ml water. Pushers are pressed
422 with a force of 5 N against the dough.

423 **Noodle makers** with a mixing function are fed with wheat flour and water in turn, 32 g water
424 being used for each 100 g of wheat flour unless the instructions specify a more severe mixture.
425 The quantity of the mixture is the maximum stated in the instructions.

3.1.9.117 Potato peelers of the container type are operated filled with water and potatoes. 5 kg of approximately spherical potatoes are used, each kilogram containing 12 to 15 potatoes.

Hand-held peelers and lathe-type peelers are operated by peeling potatoes.

3.1.9.118 Vegetable graters and shredders are operated with carrots that have been soaked in water for approximately 24 h and cut into suitable pieces. Five batches, each containing 0,5 kg of soaked carrots, are used. Pushers are pressed with a force of 5 N against the carrots.

3.1.9.119 Bean slicers, knife sharpeners, sieving machines and slicing machines are operated without load.

3.5 Definitions relating to types of appliances

3.5.101

food mixer

appliance intended for mixing food ingredients

3.5.102

food processor

appliance intended to finely chop batches of meat, cheese, vegetables and other foods by means of cutting blades rotating in a container

Note 1 to entry: Other functions may be performed by rotating blades, disks, paddles, or similar means used in place of the cutting blades.

Note 2 to entry: Choppers are considered to be **food processors**.

3.5.103

mincer

appliance intended to finely cut meat and other foods by the action of a feed screw, knives and perforated screens

3.5.104

blender

appliance intended to pulverise solids, such as ice, vegetables or fruit, and to combine them into a blend, or to merge liquids and solids into a blend (**food blenders**) or to combine liquids only (**liquid blenders**)

3.5.105

cordless blender

blender incorporating a motor and which is connected to the supply and operated only when placed on its associated stand

3.5.106

noodle maker

appliance without a mixing function intended to make noodles by extrusion or other means or an appliance with a mixing function intended to make noodles by extrusion only

3.5.107

auger juicer

appliance intended to juice various fruits and vegetables by use of an auger to crush the food load and a strainer to separate the juice from the pulp

Note 1 to Entry: An auger is a screw, transporting food load, where the volume decreases and thus crushing the food load.

3.7 Definitions relating to safety of components