SLOVENSKI STANDARD
SIST EN 16889:2016

01-julij-2016

Higiena živil - Priprava in dostava toplih napitkov iz naprav za tople napitke - Higienske zahteve, migracijski preskus

Food hygiene - Production and dispense of hot beverages from hot beverage appliances - Hygiene requirements, migration test

Lebensmittelhygiene - Herstellung und Abgabe von Heißgetränken aus Heißgetränkebereitern - Hygieneanforderungen, Migrationsprüfung

Hygiène alimentaire - Production et remise de boissons chaudes préparées par des producteurs de boissons chaudes - Exigences hygiéniques

Ta slovenski standard je istoveten z: **EN 16889:2016**

ICS:

67.160.01	Pijače na splošno	Beverages in general
97.040.50	Majhni gospodinjski aparati	Small kitchen appliances

SIST EN 16889:2016 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

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English Version

Food hygiene - Production and dispense of hot beverages from hot beverage appliances - Hygiene requirements, migration test

Hygiène alimentaire - Production et distribution de boissons chaudes par des appareils de préparation de boissons chaudes - Exigences sanitaires, essai de migration

Lebensmittelhygiene - Herstellung und Abgabe von Heißgetränken aus Heißgetränkebereitern - Hygieneanforderungen, Migrationsprüfung

This European Standard was approved by CEN on 11 March 2016.

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

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 16889:2016) has been prepared by Technical Committee CEN/TC C01 “Food Products”, the secretariat of which is held by CCMC.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 2016 and conflicting national standards shall be withdrawn at the latest by November 2016.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document is the result of the merging of DIN 10531:2011 and UNI 11460:2012.

DIN 10531 has been prepared by Working Committee NA 057-02-01 AA “Lebensmittelhygiene” (“Food hygiene”), Working Group “Getränkebereiter” (“Beverage appliances”) of the Food and Agricultural Products Standards Committee (NAL).

UNI 11460 has been prepared by the Technical Committee Assofootec/Ucimac and it has been discussed and amended by UNI Commission “Alimenti e bevande” in which there are members of “Istituto Superiore di Sanità” and “Ministero della Salute”.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies hygiene requirements which establish prerequisites for production of hot beverages, such as coffee and coffee specialities, tea, cocoa and dairy beverages from hot beverage appliances for commercial and household use in conformity with the food hygiene regulations and for placing on the market. Appliances for self-service are within the scope of this standard.

For this purpose, this standard specifies general hygienic requirements for the construction, material and operation of the appliances concerned. It contains, in particular, requirements for hygienic and professional operation, for cleaning, disinfection and descaling as well as requirements for a migration test.

This European Standard applies to appliances before their entering on the market (new machines) and it also gives an informative Annex for appliances already in use (see Annex A).

This European Standard does not deal with any requirements relevant to work safety. This European Standard deals neither with electrical safety nor with performance requirements. EN 60335-2-15 and EN 60335-2-75 have to be used for commercially used appliances. Methods for measuring the performance of electric household coffee makers are provided in EN 60661.

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.

EN 1672-2, *Food processing machinery - Basic concepts - Part 2: Hygiene requirements*

EN 60335-2-15, *Household and similar electrical appliances - Safety - Part 2-15: Particular requirements for appliances for heating liquids*

EN 60335-2-75:2004, *Household and similar electrical appliances - Safety - Part 2-75: Particular requirements for commercial dispensing appliances and vending machines (IEC 60335-2-75:2002, modified)*[1)]

EN ISO 12100, *Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 12100 and the following apply.

3.1
hot beverage appliance
device for the preparation of hot beverages

3.2
hot beverage
ready to drink, prepared foodstuff to be consumed as soon as possible, if necessary after heat retention

Note 1 to entry: The point of dispense is the beverage outlet of the device.

1) This document is impacted by the amendments EN 60335-2-75:2004/A1:2005, EN 60335-2-75:2004/A2:2008, EN 60335-2-75:2004/A11:2006, and EN 60335-2-75:2004/A12:2010.

3.3
cleaning
removal of product residues and soils

3.4
disinfection
chemical and physical methods for killing microorganisms down to a level which is neither harmful to health nor impairs the quality of the foodstuffs

3.5
descaling
method for removal of lime deposits inside of the hot beverage appliance

3.6
adverse influence
effect which gives a significant reduction of the fitness for consumption of a food

3.7
food area
machinery surfaces which are exposed to the food and from which the food or other materials can drain, drip, diffuse or be drawn into (self-returned) the food or food container

3.8
splash area
area composed of surfaces on which part of the food may splash or flow along under intended conditions of use and does not return into the food

3.9
migration
process by which components of the materials touched by the product pass into the test water under specified conditions

3.10
migration test
test for determination of migration

3.11
Product type
product such as coffee, cocoa, tea and milk foam, which is characterised by the fact that the parts which come into contact with foodstuffs differ

3.12
hydraulic system
all parts of the system, except for non-heated storage containers, which come into contact with liquid food stuffs, e.g. steam, milk, water

3.13
water storage container
non-heated container for the water storage

3.14
specific release limit
SRL
describes the maximum permitted amount of a given ion or metalloid ion (in mg) when released from a material or article of a defined surface area into food (in kg) or food simulants

Note 1 to entry: According to the Directorate for the Quality of Medicines and HealthCare of the Council of Europe (EDQM): Metals and alloys used in food contact materials and articles, Council of Europe, 2013 [1]. ISBN: 978–92–871–7703–2.

4 Requirements

4.1 General

For the production and dispensation of hot beverages from hot beverage appliances to the user, the requirements for each relevant legal provision shall be conformed to.

NOTE In particular, the Regulation (EC) No 1935/2004 [2], Regulation (EC) No 2023/2006 [3] and the applicable hygiene provisions (see bibliography) apply.

To ensure this for the production and dispensation of hot beverages from hot beverage appliances, the following requirements shall be conformed to.

4.2 Proper handling of products

a) Hot beverages shall be placed on the market by way of hot beverage appliances, so that they, under observation of the necessary care, are not exposed to adverse influences during processing, storage and distribution. Depending on product, each product-specific temperature shall be taken into account.

b) Water for hot beverages from hot beverage appliances shall reach a minimum temperature of 65 °C over the course of the product preparation.

4.3 Equipment

4.3.1 Materials and surfaces

Materials in the food area shall fulfil the following requirements:

a) they shall correspond to the legal requirements;

b) they shall not dispense any parts of materials into the beverage which are questionable in regards to health, odour or taste or are technically avoidable;

c) they shall be corrosion-resistant.

NOTE 1 Corrosion-resistant materials resist the usual chemical or electrochemical stresses. This includes production processes, cleaning and disinfection in accordance with the operating instructions.

NOTE 2 For materials in the food area, Article 3 of Regulation (EC) No 1935/2004 [2] applies.

Materials in the food and splash area shall fulfil the following requirements:

d) they shall demonstrate a surface quality which corresponds with the specific operational and hygienic requirements;

e) they shall be abrasion-proof in correspondence with the intended application;

f) they shall be resistant against the foodstuffs as well as against the cleaning, disinfection and descaling agents normally used for the food and splash area;

g) they shall be temperature-resistant in correspondence with the intended application.

4.3.2 Construction

The hot beverage appliances shall be constructed so that they fulfil the basic requirements for hygienic construction in accordance with EN 1672-2 as well as the following requirements:

a) joints in the food areas shall be sealed against liquids;

b) liquids in the food areas, such as cleaning and disinfection solutions and rinsing water shall be removed to a technically unavoidable amount so that an adverse influence on the food is avoided. Liquids from the food area shall be completely drained as quickly as possible;

c) for self-service devices, a return of an already dispensed hot beverage shall not be possible under foreseeable application conditions.

4.4 Requirements for operation

4.4.1 Cleaning, descaling and disinfection of the device

The appliances shall be regularly cleaned and, if necessary, disinfected, descaled and rinsed, according to the manufacturer's instructions.

To ensure the functionality and hygiene of the hot beverage appliance, cleaning and descaling agents recommended by the manufacturer shall be used.

The test on a proper descaling presupposes the use of the decalcification agent recommended by the manufacturer.

4.4.2 Performance of a migration test on hot beverage appliances

4.4.2.1 General

The manufacturer has to ensure, in the framework of due diligence, e.g. in the framework of the type test, by means of a migration test, that no inadmissible material transfer, such as of lead and nickel, can appear in the hot beverage from the appliance. The test is performed on a sample. If the guideline values are exceeded in accordance with 4.4.2.4, the test is repeated on three structurally identical samples. The arithmetic mean of the four measured values shall not exceed the guideline value. None of the single values shall exceed the guideline values by more than 50 %. The following specified migration test should be performed according to the same principle for the assessment of further substances.

4.4.2.2 Preparation of the test water

The following chemicals (at minimum in per analysis quality) shall be dissolved in 1 l of demineralized water (stock solution):

a) 14,3 mmol/l $NaHCO_3$ (1,2 g/l);

b) 2,8 mmol/l $MgSO_4 \cdot 7\ H_2O$ (0,7 g/l);

c) 8,0 mmol/l $CaCl_2 \cdot 2\ H_2O$ (1,2 g/l).

500 ml of this stock solution are given, while stirring, into a container containing approximately 7 l of demineralized water. The container is filled up to 10 l with demineralized water, the pH balance with 0,1 mol/l HNO_3 or 0,1 mol/l NaOH is set to the pH value 7,5 and is subsequently stirred for 10 min.