

<b>STN</b>	<b>Komerčné umývačky riadu Hygienické požiadavky a skúšanie</b>	<b>STN EN 17735</b>  51 4098
------------	---	--

Commercial dishwashing machines - Hygiene requirements and testing

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/23

Obsahuje: EN 17735:2022

**136469**

EUROPEAN STANDARD

EN 17735

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2022

ICS 97.040.40

English Version

## Commercial dishwashing machines - Hygiene requirements and testing

Machines à laver la vaisselle commerciales - Exigences liées à l'hygiène et essais

Gewerbliche Spülmaschinen - Hygieneanforderungen und Prüfung

This European Standard was approved by CEN on 14 November 2022.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard 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 CEN-CENELEC Management Centre or to any CEN member.

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.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

## EN 17735:2022 (E)

<b>Contents</b>	<b>Page</b>
<b>European foreword</b> .....	<b>4</b>
<b>1 Scope</b> .....	<b>5</b>
<b>2 Normative references</b> .....	<b>5</b>
<b>3 Terms and definitions</b> .....	<b>5</b>
<b>4 Requirements</b> .....	<b>10</b>
<b>4.1 Process requirements</b> .....	<b>10</b>
<b>4.1.1 General</b> .....	<b>10</b>
<b>4.1.2 Requirements for obtaining hygienic washing results</b> .....	<b>10</b>
<b>4.2 Technical requirements</b> .....	<b>12</b>
<b>4.2.1 Requirements relating to construction materials</b> .....	<b>12</b>
<b>4.2.2 Functional requirements</b> .....	<b>12</b>
<b>4.3 Requirements relating to the treating agents</b> .....	<b>13</b>
<b>5 Testing</b> .....	<b>13</b>
<b>5.1 General</b> .....	<b>13</b>
<b>5.2 Type and scope of tests</b> .....	<b>13</b>
<b>5.3 Test procedures</b> .....	<b>14</b>
<b>5.3.1 Type test</b> .....	<b>14</b>
<b>5.3.2 Post-installation test</b> .....	<b>17</b>
<b>5.4 Overview of the number of samples for microbiological testing and the associated record sheets</b> .....	<b>18</b>
<b>Annex A (normative) Testing of hygienic operation of dishwashing machines – type test and post-installation test</b> .....	<b>19</b>
<b>A.1 Load</b> .....	<b>19</b>
<b>A.1.1 Type testing</b> .....	<b>19</b>
<b>A.1.2 Post-installation testing</b> .....	<b>24</b>
<b>A.2 Microbiological test methods</b> .....	<b>25</b>
<b>A.2.1 Determination of microbial reduction by bioindicators</b> .....	<b>25</b>
<b>A.2.2 Aerobic colony count of wash ware surface</b> .....	<b>28</b>
<b>A.2.3 Determination of the aerobic colony count of the detergent solution</b> .....	<b>28</b>
<b>A.3 Reference detergent and rinse aid for the type test</b> .....	<b>29</b>
<b>A.3.1 General</b> .....	<b>29</b>
<b>A.3.2 Reference detergent</b> .....	<b>29</b>
<b>A.3.3 Reference rinse aid</b> .....	<b>30</b>
<b>A.4 Test report</b> .....	<b>30</b>
<b>A.4.1 Documentation</b> .....	<b>30</b>
<b>A.4.2 Data in the test report</b> .....	<b>30</b>
<b>Annex B (informative) Technical recommendations onsite</b> .....	<b>32</b>
<b>B.1 Functional requirements relating to the operation of dishwashing machines</b> .....	<b>32</b>

<b>B.1.1</b>	<b>General</b> .....	<b>32</b>
<b>B.1.2</b>	<b>Water quality</b> .....	<b>32</b>
<b>B.1.3</b>	<b>Temperature</b> .....	<b>33</b>
<b>B.1.4</b>	<b>Contact time</b> .....	<b>33</b>
<b>B.1.5</b>	<b>Requirements relating to the treating agents</b> .....	<b>34</b>
<b>B.2</b>	<b>Testing</b> .....	<b>35</b>
<b>B.2.1</b>	<b>General</b> .....	<b>35</b>
<b>B.2.2</b>	<b>Type of tests and scope of testing onsite</b> .....	<b>35</b>
<b>B.2.3</b>	<b>Daily inspection</b> .....	<b>36</b>
<b>B.2.4</b>	<b>Periodic inspection</b> .....	<b>36</b>
<b>B.2.5</b>	<b>Overview of the number of samples for microbiological testing and the associated record sheets</b> .....	<b>36</b>
<b>Annex C</b>	<b>(informative) Guideline for planning, organization of the dishwashing process, maintenance and servicing of dishwashing machines and also relating to wash ware</b> .....	<b>37</b>
<b>C.1</b>	<b>Planning of dishwashing machine facilities</b> .....	<b>37</b>
<b>C.2</b>	<b>Organization of the dishwashing process</b> .....	<b>38</b>
<b>C.2.1</b>	<b>Operating personnel</b> .....	<b>38</b>
<b>C.2.2</b>	<b>Receiving of used wash ware</b> .....	<b>38</b>
<b>C.2.3</b>	<b>Pre-cleaning and loading of dishwashing machines</b> .....	<b>38</b>
<b>C.2.4</b>	<b>Dishwashing machine programme cycle</b> .....	<b>38</b>
<b>C.2.5</b>	<b>Drying and preparation and storage of the wash ware for further use</b> .....	<b>39</b>
<b>C.3</b>	<b>Maintenance and servicing</b> .....	<b>39</b>
<b>C.3.1</b>	<b>Operational and functional safety</b> .....	<b>39</b>
<b>C.3.2</b>	<b>Operation logbook</b> .....	<b>39</b>
<b>C.3.3</b>	<b>Cleaning of dishwashing machine</b> .....	<b>39</b>
<b>C.4</b>	<b>Wash ware</b> .....	<b>40</b>
<b>C.4.1</b>	<b>General</b> .....	<b>40</b>
<b>C.4.2</b>	<b>Shape</b> .....	<b>40</b>
<b>C.4.3</b>	<b>Surface characteristics</b> .....	<b>40</b>
<b>C.4.4</b>	<b>Shape and surface of drinking glasses</b> .....	<b>40</b>
<b>Annex D</b>	<b>(informative) Examples record sheets</b> .....	<b>41</b>
<b>D.1</b>	<b>Evaluation of the determination of the surface aerobic colony count</b> .....	<b>41</b>
<b>D.2</b>	<b>Checking the aerobic microorganism count of the detergent solution</b> .....	<b>41</b>
<b>D.3</b>	<b>Results of inspection with bioindicators</b> .....	<b>42</b>
<b>Annex E</b>	<b>(informative) Alternative Test Method</b> .....	<b>45</b>
<b>Bibliography</b>	.....	<b>46</b>

**EN 17735:2022 (E)****European foreword**

This document (EN 17735:2022) has been prepared by Technical Committee CEN/TC 429 “Food hygiene - Commercial warewashing machines - Hygiene requirements and testing”, the secretariat of which is held by DIN.

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 June 2023, and conflicting national standards shall be withdrawn at the latest by June 2023.

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

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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

## 1 Scope

This document specifies hygiene requirements for the operation of commercial dishwashing machines (hereinafter referred to as dishwashing machines) and the tests to be performed on these machines. It specifies requirements for reaching an appropriate hygienic status of articles treated in the dishwashing machines. This document also includes guidelines for the hygienic and proper operation, care and maintenance of dishwashing machines. Furthermore, methods for testing hygienic operation are defined.

This document applies to dishwashing machines used in a professional environment for cleaning wash ware that is used in contact with food, such as plates, crockery, glassware, cutlery, reusable boxes and similar articles.

Dishwashing machines are used in professional kitchens, e.g. in restaurants, canteens and hospitals and in businesses such as bakeries, butcher's shops, etc.

This document does not apply to domestic dishwashing machines, washer disinfectors for the treatment of medical devices and machines for industrial use.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

EN 10088-3, *Stainless steels — Part 3: Technical delivery conditions for semi-finished products, bars, rods, wire, sections and bright products of corrosion resisting steels for general purposes*

EN IEC 63136, *Electric dishwashers for commercial use — Test methods for measuring the performance (IEC 63136)*

EN ISO 18593, *Microbiology of the food chain — Horizontal methods for surface sampling (ISO 18593)*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**