
**Materials and articles in contact with
foodstuffs — Cutlery and table holloware —**

Part 6:
**Lightly silver-plated table holloware
protected by lacquer**

*Matériaux et objets en contact avec les denrées alimentaires — Coutellerie
et orfèvrerie de table —*

Partie 6: Orfèvrerie de table laquée et avec un léger placage d'argent

ISO 8442-6:2000

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this part of ISO 8442 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 8442-6 was prepared by the European Committee for Standardization (CEN) in collaboration with ISO Technical Committee TC 186, *Cutlery and table and decorative metal hollow-ware*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

Throughout the text of this standard, read "...this European Standard..." to mean "...this International Standard...".

ISO 8442 consists of the following parts, under the general title *Materials and articles in contact with foodstuffs — Cutlery and table holloware*:

- *Part 1: Requirements for cutlery for the preparation of food*
- *Part 2: Requirements for stainless steel and silver-plated cutlery*
- *Part 3: Requirements for silver-plated table and decorative holloware*
- *Part 4: Requirements for gold plated cutlery*
- *Part 5: Specification for sharpness and edge retention test of cutlery*
- *Part 6: Lightly silver-plated table holloware protected by lacquer*
- *Part 7: Requirements for table cutlery made of silver, other precious metals and their alloys*
- *Part 8: Requirements for silver table and decorative holloware*

Annexes A to I form a normative part of this part of ISO 8442. Annex J is for information only.

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Foreword

The text of EN ISO 8442-6:2000 has been prepared by Technical Committee CEN/TC 194 "Utensils in contact with food", the secretariat of which is held by BSI, in collaboration with Technical Committee ISO/TC 186 "Cutlery and table and decorative metal hollow-ware".

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 March 2001, and conflicting national standards shall be withdrawn at the latest by March 2001.

Attention is drawn to the European Community Directives relative to materials in contact with foodstuffs, in particular Directives 89/109/EEC and 90/128/EEC.

EN ISO 8442 consists of the following parts:

Part 1: Requirements for cutlery for the preparation of food
Part 2: Requirements for stainless steel and silver-plated cutlery
Part 3: Requirements for silver-plated table and decorative holloware
Part 4: Requirements for gold-plated cutlery
Further parts are proposed with the following titles

Part 5: Specification for sharpness and edge retention test of cutlery
Part 7: Requirements for table cutlery made of silver, other precious metals and their alloys
Part 8: Requirements for silver table and decorative holloware

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This Standard specifies material and performance requirements for table holloware and cast attachments, made from metals which are lightly silver-plated and protected by lacquer.

This Standard is applicable to such items as jugs, dishes, wine coolers, tea- and coffee-pots, trays and tureens.

Requirements are specified for brass, copper, bronze, nickel-silver, pewter and stainless steel holloware with a light silver-plating and a lacquered coating.

The standard does not cover holloware made entirely of precious metals, brass, nickel-silver, stainless steel or made from ceramics or glass or non-stainless steel or zinc-based die cast.

Composition limits are specified for the basic metals for fabrication of the holloware prior to silver-plating and lacquering.

The standard does not include requirements for design, size or any other characteristics which are matters of personal choice or which can be readily assessed by the purchaser at the point of sale.

2 Normative references

This Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

ISO 301	Zinc alloy ingots intended for casting
EN ISO 2177	Metallic coatings - Measurement of coating thickness – Coulometric method by anodic dissolution (ISO 2177:1985)
ISO 4481	Cutlery and flatware - Nomenclature
ISO 6508	Metallic materials - Hardness test - Rockwell test (scales A-B-C-D-E-F-G-H-K)
EN ISO 8442-2:1997	Materials and articles in contact with foodstuffs — Cutlery and table holloware - Part 2: Requirements for stainless steel and silver-plated cutlery (ISO 8442-2 : 1997)
EN 10088-1	Stainless Steels - Part 1: List of stainless steels
ENV 12875-1:1998	Mechanical dishwashing resistance of domestic utensils — Part 1:Reference test method

3 Terms and definitions

For the purposes of this European standard the following terms and definitions apply.

3.1

table holloware

items formed into a hollow shape for the containment of food or drinks.

3.2

functional surface

exterior surface of table holloware or the interior surface of a shallow item of holloware, the surface of which will receive usage equivalent to, or exceeding that of, the exterior.

3.3

other surfaces

surface of an item of holloware which is lightly silver-plated and lacquered principally for aesthetic reasons, e.g. the interiors of pots, or which is lightly silver-plated and lacquered for use with food or drinks but which will receive a minimum of abrasive usage.

3.4

attachments

component of an item of holloware joined to it.

3.5

load-bearing attachments

attachment upon which a force resulting from the support of the mass of the holloware and/or its contents will be applied in normal use and comprising such items as handles, taps, feet, bases, spouts and goblet stems.

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3.6

burr

metal in excess of that required to shape an article and which forms a thin plate at its edges.

3.7

vessel

item of holloware specifically intended as a container for food and/or liquid.

3.8

usable capacity

volume of liquid required to fill a vessel to 15 mm \pm 1 mm from its rim.

3.9

popping

sudden transformation of an apparently flat surface of an item of holloware from convex to concave when a load is applied to the convex side, usually accompanied by a distinctive sound.

3.10**visual inspection**

examination carried out from a distance of (250 ± 50) mm with the unaided eye, or using normal corrected vision only, at ambient light levels sufficient to provide 250 lux at the surface under inspection

3.11**light silver plating**

silver coating with a thickness in excess of $0,3 \mu\text{m}$ but less than $5 \mu\text{m}$

3.12**lacquer**

polymer coating

4 Materials**4.1 Metal**

4.1.1 The composition of the metals from which the holloware is made shall be as given in table 1.

4.1.2 When determined in accordance with annex B.3 silver coatings shall have a minimum content of 98,5 % Ag.

4.2 Non-metals

Non-metal parts of table holloware shall be capable of withstanding either washing processes in aqueous dishwashing solutions at $50 \text{ }^\circ\text{C}$ or the test according to annex A.

NOTE Non-metal parts of lacquered lightly silver-plated holloware may be made of such materials as glass, ceramic, bone, horn, vulcanized fibres, plastics, wood, wood-plastics laminates or impregnated wood.

Table 1 —Base metals for lacquered, lightly silver-plated holloware

Materials	Chemical composition (%)									
	C max	Cr Min	Ni min	Cu min	Mn max	Fe max	Pb max	As min	Sn min	Zn min
Austenitic stainless steel ³⁾	0,10	17	8							
Ferritic stainless steel ³⁾	0,10	13								
Mild steel	0,08	0,087			0,45					
Nickel-silver (Cu, Ni, Zn)			9	60	0,5	0,3	0,5			
Brass (Cu, Zn)				60			3,5 ²⁾			
Copper				99,4			0,2	0,2		
ISO 301 Alloy ZnA14										
ISO 301 Alloy ZnA14Cu1				max 1						
Pewter Alloy ¹⁾							0,5		90	
							0,3			

¹⁾ Only for attachments which do not come into contact with food.
²⁾ Any part of the item that comes into direct contact with foodstuffs shall not have a Pb content of greater than 0,05%
³⁾ The chemical composition of the stainless steel sections of the articles shall conform to the requirements of EN 10088-1

5 Construction

5.1 Average thickness

When measured in accordance with annex B (mass of coatings) and annex B of EN ISO 8442-2 : 1997 (area of coatings), the average thickness of silver coatings on the surface(s) of each finished item, with the exception of the other surfaces of an item of holloware, shall not be less than 0,3 µm with a minimum local thickness of 0,2 µm.

5.2 Uniformity and absence of defects

5.2.1 All surfaces shall be free from cracks and other defects.

5.2.2 All accessible edges shall be free from burrs and shall not be rough

5.2.3 Gaps between components shall not exceed 0,4 mm. Seams joining hollow sections together shall be watertight unless otherwise required by the design.