

餐具器皿
保养指南

MAINTENANCE INSTRUCTIONS

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目录

1. 简介	2
2. 预洗	3
3. 餐具筐摆放	4
4. 洗涤	5
5. 擦干	6
6. 抛光	7
6.1 抛光膏	
6.2 热电解抛光	
6.3 常温加工	
6.4 冲洗和擦干	
7. 钢球抛光 (磨光)	10
8. 储存	12

生产原料

银	13
用途	
化学成分	
特点	
镀银层的量和厚度	
镀银质量监控	
镀银产品的缺点	
硫化作用	
氧化作用	
银盐的形成	
镀银铜和铜合金的磨损	
镀银脱落	

Index

1. Introduction	2
2. Pre-washing	3
3. Basket placement	4
4. Washing	5
5. Drying	6
6. Polishing	7
6.1 Creams and sprays for polishing	
6.2 Hot electrolytic polishing process	
6.3 Cold processing	
6.4 Rinsing and drying	
7. Steel-sphere polishing	10
8. Storage	12

Materials

Silver	13
Use	
Chemical composition	
Characteristics	
Thickness and deposit of the silver	
Quality control of silver plating	
Common problems with silverware	
Sulphide	
Oxidation	
Formation of silver salts	
Wear of silver-plate covering copper or copper alloys	
Peeling and flaking	

1. 简介

餐桌上摆放器具的选择和保养对于一个酒店的声誉来说至关重要。

按照供应商提供的保养指南进行操作，会很容易进行耐用器具的定期保养和维护。

我们的目标是：在采用一般技术的基础上应对问题并澄清错误的原因，以更好地根除错误或预防错误。

保养银质餐具的重要步骤列举如下

- 预洗
- 放置于餐具篮
- 洗涤
- 擦干
- 抛光
- 磨光 磨光
- 储存

1. Introduction

The choice and care of the objects with which the table is laid out is a fundamental value that concurs to determine the prestige of a Hotel.

The long lasting quality of the objects is easily maintained with scheduled care and maintenance by the application of the guidelines provided by the supplier.

Our aim is to face these problems on a moderate technical base and clarify the most frequent causes of mistake in order to eliminate them or better prevent them.

The essential steps for the maintenance of the silver tableware can be outlined as follows:

- *Pre-washing*
- *Basket Placement*
- *Washing*
- *Drying*
- *Polishing*
- *Burnishing*
- *Storage*

2. 预洗

在餐具使用后应立即处理，这对于避免残留物的积累来说很重要。

用软刷或冲水清除餐具上的残留食物，在清理中注意将刀叉和器皿分开，然后分批将餐具放入预洗溶液中，注意不要一次放入太多的餐具。

这项操作有助于避免银器被硫化。



正确 / correct

该预洗溶液必须是碱性溶液，以中和食物残渣的酸性。

在任何情况下都避免使用含有氯，碘和溴化物的清洁产品。预洗时间须持续5到20分钟，但不能超过30分钟。

餐具浸泡在预洗溶液的时间不得超过规定的时间，否则餐具将被硫化、氧化或被腐蚀甚至外层脱落。当溶液表面的泡沫消散但器具还依然油腻时，应更换预洗溶液。

不宜将铝制餐具放入上述溶液中，因为这会加速腐蚀过程。



2. Pre-washing

It is important to execute the operation soon after the use in order to avoid the accumulation of residue.

Eliminate any residual food using a soft brush or a water jet, having care to maintain separate the cutlery from the holloware, therefore immerse the individual pieces in the pre-washing solution avoiding the introduction of too many pieces at the same time.

This operation is fundamental in order to prevent the deposition of sulphur on the silverware.



错误 / incorrect

The solution must be of alkaline nature in order to neutralise the acidic nature of food residue.

Avoid in any case products containing chlorides, iodides, bromides and acid-base products. The pre-washing must last from 5 to 20 minutes and never exceed 30 minutes.

Do not leave any pieces in the pre-washing solution longer than the advised time: in this case the silver could become sulphurous, oxidised, be corroded or even flake. Replace the pre-washing solution when on the surface the typical sappy formation has dissipated, but a greasy film still persists.

It is not advisable to immerse in this solution the aluminium parts made, as it could accelerate the corrosion process.

3. 餐具筐摆放

餐具筐摆放是指：将餐具放置于一个特殊的小筐子里面，以便进行清洗。

小筐子和托架内的餐具必须垂直摆放，并保持适当的距离以便每个餐具都能被充分清洗和冲刷。在此推荐使用塑料托架。



3. Basket placement

Basket placement refers to the operation of positioning the pieces in the special small baskets for washing.

The small baskets or supports must allow the vertical position of the pieces at a suitable distance in order to enable that each piece is adequately invested by the washing and rinsing jet.

Plastic supports are recommended.



从预洗溶液中取出的餐具应立即摆放于小筐内，并仔细冲洗以避免残留的预洗溶液玷污清洗液。

Pieces extracted from the pre-washing solution must immediately be positioned in the small baskets and carefully rinsed in order to avoid that residual pre-washing solution pollute the washing solution.



4. 洗涤

此项操作的基本要素如下：

- 洗涤液的温度（65-75 摄氏度）。
- 根据制造商的建议，洗涤剂的浓度为 3-5%。
- 使用高品质的洗涤剂。

经广泛证实，餐具清洗机的运作时间、水量多少以及水温是取得良好洗涤效果的要素。想要机器进行最佳运作，需要保证水质、足够的水量以及水压。

水不能包含像沙尘似的固体物质，否则可能会堵塞喷嘴。

为了消除水中的杂质，应安装过滤器。

建议使用超声波清洗器清洗餐具
清洗方法如：6.2

4. Washing

The fundamental parameters of this operation are:

- *Temperature of the washing solution: 65-75° C.*
- *Concentration of detergent 3-5%, according to manufacturer suggestions.*
- *Use of quality detergent.*

The operating times of the washing machine, the amount of water and the temperature are parameters widely tested and suitable to grant excellent results. It is necessary to ensure that the quality, the quantity and the pressure of water will be sufficient to the optimal operation of the machine.

The water must not contain solid substances, like sand and dust, potentially harmful as they may obstruct the nozzles.

The installation of filters is recommended, in order to eliminate all other substances from the water.

We recommend using ultrasound cleaner to deep clean the silverware.
Clean method refer to 6.2

世界各地的饮用水都会加入二氧化氯，在洗碗机工作过程中，二氧化氯很容易形成氯酸（ HClO_3 ），氯酸对银质餐具、不锈钢餐具，尤其是马氏体钢餐具具有腐蚀作用。这种腐蚀现象非常明显，餐具放进洗碗机进行第一次清洗时就马上显现出被腐蚀的痕迹。为了尽量减少腐蚀带来的危害，清洗过程一结束，就得立即把洗涤餐具拿出洗碗机，即使餐具看起来已经干了，还得用软布再擦一遍。为了避免腐蚀问题，必须要在洗碗机水上流区安装去氯器。

It occurs that chlorine dioxide added to drinking water worldwide, during the cycle of dishwashers tends to form chloric acid (HClO_3), an aggressive agent for silver plated as well as stainless steel items and especially for martensitic steels used in cutlery. This phenomenon is so evident that products may show signs of corrosive attack even right from the first washing in a dishwasher. To minimize the problem products must be removed from the dishwasher as soon as the cycle is completed and wiped dry with a soft cloth, even if they seem dry.
To avoid this problem it is necessary to install a dechlorinator upstream from the dishwasher.

5. 擦干

冲洗后必须立刻将餐具架从清洁机中取出。每个餐具都必须用软布擦拭以去除任何湿痕，即使餐具看起来已经干了，也要擦拭。每个餐具都应经过检查并摆放整齐。有污痕或残留的餐具应重新进行预洗程序

5. Drying

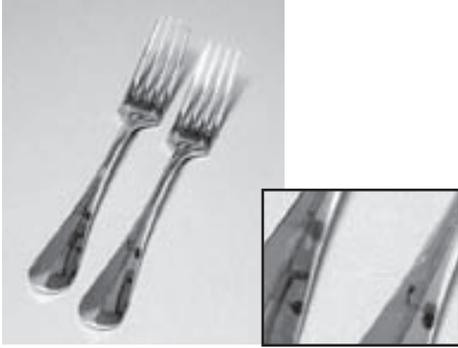
After rinsing, the supports must be immediately removed from the washing machine. Each piece must be passed with a soft cloth in order to remove any traces of humidity even if they look already dry. Each piece will be checked and put away tidily. The pieces still exhibiting traces of dirt or residue must newly be assigned to a pre-washing procedure.



6. 抛光

光是为了消除银器上的硫化和/氧化污渍，让银器恢复原本的光泽。

有很多方法用来进行抛光。



6. Polishing

Polishing is necessary to eliminate the signs of the sulphur and/or oxidation and to restore a shining aspect to silver.

There are many ways to carry out a good polishing operation.



6.1 抛光膏和喷剂

很多抛光膏都含有磨料微粒。通过摩擦可以去除餐具表面的黑点，让其恢复表面原本的光泽。

推荐定期使用这种抛光膏，但不能过量（每季度最多使用1到2次）这样能避免银的磨损。

特别注意应完全清除餐具装饰、雕刻处以及餐叉上的残留物。有的抛光膏会在餐具表面形成一层油腻的保护膜，这样看起来不太美观，但是好的产品会在表面形成一层隐形的保护层，即使仔细观察也不太明显。



6.1 Cream and spray for polishing

They are creams with abrasive micro particles. The abrasive action removes the dark spots and the surface returns shiny.

A regular, but not excessive, use of these creams is recommended (maximum 1-2 times per season) in order to avoid to damage silver.

It is necessary to pay attention to the complete removal of residue that may be present in ornaments, engravings or in the prongs of forks.

Some creams form a greasy protective layer that could be considered aesthetically unpleasant.

A good product instead leave a protecting layer totally invisible.

Twinkle silver polish Kit from SC JOHNSON guarantees easy use and impeccable results.

6.2 热电解抛光过程

在一个有铝片的小盆里小心放入镀银餐具，确保每个餐具都能与铝片直接接触。

溶液倒入75-85摄氏度的热

水中，直到餐具完全浸没于溶剂中。操作大约1到3分钟后把餐具从溶液中拿出，并立即进行冲洗



6.2 Hot electrolytic polishing process

In a small basin containing an aluminium plate, carefully place the silver-plated products making sure that each piece maintains direct contact with the aluminium plate. Pour a solution of in hot water at 75-85°C until the products are completely dipped. Let operate for 1-3 minutes then take the pieces out of the solution and rinse them immediately.



只有镀银器具不含油并且铝片没有任何涂层的情况下，才能产生电解过程。在清洁过程中铝片是很容易磨损的，所以在必要时要进行更换。

处理过程的时间很重要。银器浸泡于热溶液的时间过长会使银器变软。

The electrolytic process only works if the silver-plated products are free of fat and the aluminium plate does not have any coating. The aluminium plate is susceptible to wear during the cleaning process and must therefore be replaced when necessary.

It is fundamental to respect the times of the treatment. An extended immersion in the warm solution could soften the silver.

6.3 冷处理

清洁冷处理是指将餐具浸泡于清洁液中。这里有各种类型的清洁液：

高酸性的产品

这种产品通常含有磷酸，会破坏镀银层，伤害手的皮肤并且损害钢镀铬。

在经过这种产品处理后，银的氧化速度会比以前更快。

快速去氧化的液体肥皂

这是低酸性的皂液，因此对器具和人手的刺激很小。

如果餐具体积小，可以将其浸泡于此液体中。

如果体积较大，可将软海绵蘸清洁液对餐具进行清洁。

6.4 漂洗和擦干

在清洁完银器后就应该立即用水进行冲洗（最好使用喷头）。

使用大量的水进行冲洗很重要，这样可避免硫化会给银器留下黄色的印记。

当完全冲洗干净后，必须及时用清洁的干布擦干。如果银器在很短的时间内变黄，说明没有进行充分的冲洗或擦干。



6.3 Cold processing

It is a cleaning cold processing by the immersion in cleaning liquids. There are various types of cleaning liquids:

Products with high acidity standard

They contain phosphoric acid or hydrochloric acid, which could attack the silver layer, ruin the hands and damage the chroming of steel.

After such a treatment silver is going to oxidise more quickly than before.

Liquid soap for a fast de-oxidation

They are sappy liquids with a low acidity therefore are more delicate on pieces and on hands. If pieces are small they can be dipped into the liquid, if instead they are rather large they can be cleaned up with a soft sponge soaked in the cleaning liquid.

6.4 Rinsing and drying

Immediately after the cleaning the silverware must be rinsed in running water (even better with a shower).

It is important to use abundant current water in order to avoid that sulphur traces confer to silver a yellow flare.

When rinsing is over the pieces must be accurately dried with a clean and dry cloth. If silver becomes yellow after a short time, the cause could be due to an inadequate rinsing or drying.



7. 钢球抛光 (磨光)

每天使用热水和清洁产品进行清洗，会软化镀银层，让银器更易受撞击和损害。

为了保持银器最佳的状态，可取的办法是做定期的钢球抛光，这样既可以让银器保持光泽同时又可以减少磨损和裂痕，硬化表面镀银层。

具体操作是利用含有小钢球（直径4-5毫米）的机械装置，通过钢球在银器上滚动，可使银器表面变得有光泽、光滑并且坚硬。

这种操作能大大增加银器的寿命，并可使银器耐磨并且抗氧化。

银器在磨光之前须经常进行抛光，否则氧化反应会深入金属内部，到那时去除污渍就会变得很困难。

为了保持餐具原有的光泽和表面的硬度，建议每隔8到10天进行大约3-5分钟的抛光程序。

在第一次抛光时或当餐具好长时间未使用后，最好

延长这个流程的时间至15—30分钟。

不同类型的机器可用于钢球抛光。

7. Steel-sphere polishing (burnishing)

The daily washing in warm water with cleaning products tends to soften the silver layer, which will become therefore more sensitive to hits and damaging.

It is advisable in order to maintain silverware in the best conditions, to do periodically steel spheres polishing to make the product shining, to reduce damages and cracks and to harden the superficial silver layer.

The operation takes place in machinery containing small steel spheres (4-5 millimetres of diameter), which polish, smooth and harden the surface by rolling on silver.

The treatment increases the duration of silver objects and the surface becomes more resistant to wear and tear and to oxidation.

Silver objects must always be polished before the burnishing, otherwise the oxidation penetrates more deeply in the metal and its removal becomes even more difficult.

We advise to use this procedure every 8-10 days for 3-5 minutes, in order to preserve the original shining aspect and the hardness of the surface.

It is better to extend the treatment for 15-30 minutes on the polished objects for the first time, or when they are used after a long period of not use.

There are different types of machinery for the steel spheres polishing.

筒机

钢球放置于一个双层的滚筒内，用防水舱门密封并有泄排口。这类机械需要较大的空间运行，并且运行时间需要3到5分钟。

带式传送机

这类机械设有连续滚动的带式传送装置，上面铺有小钢球。无需中断，餐具可在运行过程中随时放置或提取。

振动机

这是最强效的抛光机，机器的钢球进行偏心旋转，带动餐具进行上下运动，这个操作持续2到3分钟。机器的操作需要特别小心，并要求有专业技巧

Drum machines

The steel spheres are in a double rotary drum, watertight closing with hatches of cargo and drainage.

These machines need a wide space and relatively long times of treatment: 3-5 min.

Tape conveyor machines

These machines have a continuous and rotary tape conveyor on which there are the steel spheres. The objects can be put or removed also during the operation without interruptions.

Vibrating machines

It is the most powerful burnishing machine.

The eccentric spin of the spheres is summed up to the ascending and descending movement of pieces: the treatment lasts 2-3 minutes and it requires particular care and professional ability.

8. 储存

银器的储存必须干净整洁，最好是在没有硫蒸汽，干燥和远离厨房的前提下进行储存。

如果需要把餐具放置于盒中，最好选用不含硫的塑料盒。

不要叠放器具。

每日使用的器具应放在清洁机的小塑料筐里，但要经常保持干燥。

避免银器与坚硬易磨的物体表面接触，以避免划痕。

8. Storage

Silverware must be stored well cleaned and tidily if possible in a premise used only for this aim which has to be without sulphur vapours, humidity and far away from kitchens.

If pieces must be put in boxes it is advisable to use plastic boxes free from sulphur or made of wood.

Never pile pieces.

Daily used objects can be left in the small plastic baskets of the washing machine, but always perfectly dry.

Avoid to leave silver pieces on hard or abrasive surfaces in order to prevent scratches.

Pack non-daily use items by plastic wrap then store in a cool & dry place.



银

银是一种贵金属，对食品中的大部分酸和碱性物质具有抵抗力。银外形美观，为餐桌布置尽添典雅，也可提升食物的香味。

用途

镀银刀具。
镀银手柄餐刀。
镀银厨具/餐具。

化学成分

999.5/1000纯银

特点

- 美观
- 超强抗腐蚀性
- 能改善食物香味

银的厚度和含量

在不锈钢/镍银刀具或餐具/厨具上覆盖银层。银层的厚度有所不同，主要取决于物体的具体用途。

在磨

损比较严重的区域（如汤匙的外表面）镀上更厚的银层。

生产的每一个阶段都由先进的软件程序监控，实现生产周期和标准认证的最优化。

镀银过程在钠槽（氰化钠溶液）中进行，与价格较便宜的钾槽相比，在钠槽形成的银层硬度更好（更耐磨损），外观优美。

Silver

Silver is a noble metal, resistant to most of the acidic and alkaline substances found in foodstuffs. Its pleasing appearance adds refinement to table settings and brings out certain flavours in food.

Used to silver products in stainless steel or nickel-silver.

Use

*Silver-plated cutlery.
Knives with silver-plated handles.
Silver-plated kitchen/tableware.*

Chemical composition

Pure silver 999.5/1000

Characteristics

- *Aesthetically pleasing.*
- *Excellent resistance to corrosion.*
- *Can improve the flavour of certain foods.*

Thickness and deposit of the silver

of silver is deposited on stainless steel and nickel-silver cutlery or table/kitchenware.

The thickness of this layer on different objects depends on their possible use.

On areas of greatest wear (for example the outer surface of spoons) the layer is thicker thanks to particular techniques developed

as hard and four times as resistant as traditional plate.

Each phase of the process is controlled by SCM, allowing the optimization of the production cycle and certification of the criteria used.

The silver-plating is performed in a sodium bath (using a sodium cyanide solution), which, in comparison to the cheaper potassium bath, allows the formation of a harder deposit of silver (and thus more resistant to wear and tear) and an aesthetically perfect finish.

镀银的质量控制

镀银产品的生产过程受到严格控制

- **银沉积量:**

有计划地对随机抽取样本进行检测

- **银层的粘着性:**

用热冲击方法检测镍银产品上镀银的粘着性: 被测产品被放在370°C高温的烘箱中加热30分钟, 然后放到水中迅速冷却-合格镀银层会出现瑕疵。对于集中使用6-8个月的不锈钢产品, 挑选出样品放入球体震动抛光机中30-40分钟, 然后检查银层的磨损情况, 合格产品不会有任何磨损痕迹

- **均匀性和光泽度:**

采用特殊的灯, 控制检测银层的外观.

银器常见问题

银器的最常见问题就是沉银均匀性和银器外观。局部和分散性褪色, 以及更严重的银层脱落会破坏沉银的均匀性和银器外观, 这些问题产生原因详细分析如下:

硫化作用

银器表面会慢慢形成硫化银, 逐渐改变银器表面的颜色: 先是变成黄褐色, 然后变为深黄褐色。

食品中(如蛋、花椰菜、贝类)或空气中(特别是沿海地区)的硫化物与银发生反应, 形成硫化银层。

因此要尽可能地避免银器和食品中的硫化物接触, 存放时要使银器远离大气中硫化物(例如, 用软布将银器包起来)。采用电解处理和手工抛光, 很容易去除硫化物。本保养手册里有详细介绍。

Quality control of the silver plate

- **Amount of silver deposited:**

a methodic check on random samples is carried out, using FISCHER thickness and hardness measurement instrument.

- **The adherence of the silver layer:**

the perfect adhesion of the silver layer tonickel-silver products is checked by a thermal shock method. The products being tested are heated in an oven at 370°C for 30 minutes and then quickly cooled in water – no defects should be seen in the silver plate. For stainless steel products 6-8 months of intensive use is simulated by subjecting some samples to a vibrating sphere burnishing machine for 30 to 40 minutes. The silver layer is examined afterwards for signs of wear and tear, of which there should be none.

- **Uniformity and shine:**

the visual aspect of the silver layer is controlled under special lamps.

Common problems with silverware

The most common problems with silverware regard the uniformity of the silver deposit and its appearance. This can be spoilt by localised or diffused tarnishing or, more seriously, by the flaking and peeling of the silver layer. A more detailed analysis of these problems follows.

Sulphuration

The slow formation of silver sulphide causes a gradual change in colour on the surface of silverware: first to tawny-yellow and then to dark brown-yellow.

The silver sulphide layer is caused by the reaction between silver and sulphides present either in foodstuffs (eggs, cauliflower, shellfish) or in the atmosphere (especially in coastal areas).

氧化作用

银氧化物的产生会使银的表面变暗。银器与任何氧化剂（如氯、漂白剂和一些碱性物质）接触都会产生这种现象。因此，在护理银器的时候，要避免接触这些物质。去除氧化物必须要采用电解处理和手工抛光。本保养手册里有详细介绍

银盐的形成

银与蛋白质接触会生成不溶的银盐，使银器表面呈暗黄色（与硫化物生成的颜色相似）。

因此，建议避免银器长时间与食物中的高蛋白接触（尤其是肉类）。

要去除最上面的银盐层，必须采用物理方法，进行手工抛光。

不建议采用化学方法去除银盐；只有腐蚀性试剂才有效，但是也会损害银盐下面的银层

As far as possible it is better to avoid contact between silverware and sulphide containing foodstuffs, and to protect silverware in storage from atmospheric sulphides (wrapping the silverware in soft cloths for example).

Sulphides can be easily removed by electrolytic treatment or by manual polishing.

Greater detail can be found in the maintenance handbook.

Oxidation

The formation of silver oxides causes the surface of the silver to darken.

This is a normal reaction occurring between silver and any oxidising agent with which it comes into contact, for example chlorine, bleach and some alkaline substances.

It is therefore necessary to avoid the use of such substances when caring for silverware.

Manual polishing or electrolytic treatment is necessary to remove the oxides.

Further details can be found in the maintenance handbook.

Formation of silver salts

The appearance of a tawny-yellow discoloration (similar to that caused by sulphur on silver) could be caused by the formation of insoluble silver salts due to contact with proteins.

It would be advisable to avoid prolonged contact of high protein foodstuffs with silver (especially meat).

Manual polishing is necessary to physically remove the top layer of silver salt deposits.

Chemical removal of these salts is not recommended; only aggressive reagents would be effective, but they would also permanently damage the underlying silver.

镀银铜和铜合金的磨损

镀银产品的镀银层被磨损，就会使下面的金属部分暴露，在金属间产生电位差。这反过来也会在银表面形成一层铜膜。这个过程需要水的参与，水充当电解质。

在这种情况下，物体就会呈现永久性的黄色，这种颜色和接触蛋白质形成的颜色非常相似。

因此，磨损的镀银产品不能像那些完好的银器一样能放在一些清洗溶液中。

通过手工抛光可以去除生成黄色的铜膜，但是，铜膜会慢慢修复。遇到这种情况，建议找专业人士重新镀银。

镀银脱落

破裂银层的表面会形成气泡或水泡，使银层下面的物质易受到氧化作用和腐蚀，导致镀银脱落。

电镀沉银过程中出现的缺陷（生产缺陷）或银局部区域加热温度过高会产生气泡和水泡。

唯一的解决方法是将相关产品重新镀银。

Wear of silver-plate covering copper or copper alloys

If the silver layer has been added to pieces of these products which were worn enough to expose the underlying metal in some parts, an electrical potential difference will be created between the metals. This in turn will lead to a film of copper being deposited on the silver. This process is favoured by the presence of water which acts as an electrolyte.

In this case, the object will take on a permanent yellowish appearance, very similar to that caused by contact with proteins.

For this reason worn silver-plated objects should never be put into the same washing solution as those which are intact.

The copper film which causes the yellow discoloration can be removed by manual polishing, however it will slowly reform. In these cases re-silver-plating by specialists is advised.

Peeling and flaking

This occurs when bubbles or blisters on the surface of the silver break, leaving the material underneath exposed and susceptible to oxidation or corrosion.

Bubbles and blisters can occur due to a defect in the galvanising process when the silver layer is being deposited (production defect) or if localised areas of the silver are over-heated.

The only solution is to have the pieces concerned re-silver-plated.