

Food contact suitability for silverware parts

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In June 2013, the Council of Europe voted for limits of migration applicable to the silver alloys and to the silvery metals used in the manufacturing of items that are used in food contact.

The EDQM guide intended for the European manufacturers comes with a resolution of the Council of Europe recommending to the Member States "to adopt legislative and other measures according to the principles and the directives expressed in the practical guide to reduce the sanitary risks resulting from exposure of consumers to certain metallic ions freed in food from contact with materials and alloys".

The EDQM guide also covers "food packed and/or prepared with the help of materials and alloys". The principle "of reasonable use" is frequently evoked.

The application of the initial recommendations emanating from the Council of Europe could cause considerable harm to the silversmith's trade. These manufacturers have produced for several hundred years silver products and silvery metal products without any proven risk to human health.

The profession totally subscribes to the precautionary principle and is completely favourable to a strict regulation that protects the consumer. On the other hand, the profession asks that the silverware products be considered as a class of specific products subjected to realistic tests, which reflect the reasonable use of these products.

"Reasonable" use of silverware products

The silverware products deserve a classification and specific tests for the following reasons:

- Our silverware products are made in compliance with standards ISO 8442-2 and ISO 8442-7. These standards cover in their field of application the silverware used for the table and for the serving of food. These standards do not include the requirements relative to flatware used for the preparation of food.
- In professional kitchens, silverware products are never utilized for the preservation of food, the preparation of dishes, or the cooking of food. This is banned by the HACCP standard. Flatware, like shaped parts (such as sauceboats or soup tureens) are items of service and tasting, never utensils for the preparation of food. The maximum temperature to which they are subjected as such is of 65°C, quickly decreasing towards an ambient temperature of 25°C.
- For domestic usage, it is the same. The price of silverware products as well as the oxidation caused by the high temperatures make these products unsuitable and uneconomic for the cooking of food.
- Furthermore, the strong heat conductivity of silver (approximately 420W / m. K in 20°C, so nearly 15 times more than that stainless steel!) also encourages the consumer not to expose these silverware parts to cooking or to reheat food: the parts cannot be seized by hand without risk of burning. So, the scenarios which expose spoons or ladles in temperatures of 70°C for several hours do not meet the definition of a "reasonable use" of silverware.
- The case of coffeepots and teapots is a particular case, because these products can be filled by liquids with temperatures slightly lower than boiling point (95°C). "The reasonable use" is a cooling towards the ambient temperature (25°C), accelerated by the strong heat conductivity of silver.
- Flatware (spoon, fork, and knife) is exclusively used for the service and the tasting of food. As such, the temperature of contact with the food is situated near 55°C (a food in approximately 55°C is felt as "warmth", and generally as "burning" over 60°C). Their time of contact with the food takes only a few minutes. Durations of tests superior to 30 minutes do not thus meet the definition of a «reasonable use".

- Fresh products can be consumed in timbales or ice cream cups. There also, the strong heat conductivity of silver encourages the consumer to use silverware for service purposes exclusively, in temperatures between 10°C and 17°C. Given the fact of the fast reheating towards the ambient, the durations "of reasonable use" are of the order of a few minutes.

For all these reasons, the trade asks for the creation of a class of silverware products, intended for service use, tasting use and for the decoration of tables.

The various product lines could be subjected to the following tests:

Products Lines	Recommendations of Tests Parameters
Flatware: forks, spoons, knives	30 minutes in 70°C in an aqueous solution of citric acid diluted in 5 g/L
Shaped parts: sauceboats, soup tureens, ladles, teapots, coffeepots	2 hours in 70°C in a solution ATW
Fresh products: timbales, cups, ice cream bowl	2 hours in 25 °C in an aqueous solution of citric acid diluted in 5 g/L

The shaped parts could be sold with a labeling, similar to that already used on products of common usage such as kitchen foil or the plastic films for food use. This labeling could be as follows: "this product was created with the highest care by our silversmiths. Please do not put this product in prolonged contact with very acid food (lemon, vinegar, tomato, etc.)"