

Test Results on Silver Care Toothbrush

We were asked to do comparative research on bacteria growth in two different kinds of toothbrushes – Silver Care and “Brand X”.

Samples of normal oral flora were taken from two people:

Streptococcus
Lactobacillus
Candida

One had Candida, the other Staphylococcus
(not used in test #1)

Test 1 In vitro test with known amount of samples in high concentration. We used the same method as used in Italy.

Test 2

In vitro test – normal brushing (2 persons) . Teeth were brushed as usual in the evening. The brushes were left free standing till the next morning. They were then dipped in sterile saltwater.

10 _____ and 20 _____ were taken from the two separate medians.

Conclusion:

Test 1

There was no difference in bacteria count after inoculation
Adhesion to the brush is the same.

The difference was minimal after 3 hours.

The number of Candida, Lactobacillus and Streptococcus dropped considerably between 3 and 6 hours. It dropped approximately 15 times more on Silver Care than Brand X.

Test 2

Candida does not grow from either toothbrush
Lactobacillus

Staphylococcus – grows only from Brand X

Streptococcus – grows from both toothbrushes, but approximately 17 times more from Brand X than from Silver Care

Our evaluation

Our capacity does not allow for extensive research. However it appears our research confirms the result from the Italian testing and research.

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Silver Care Plus

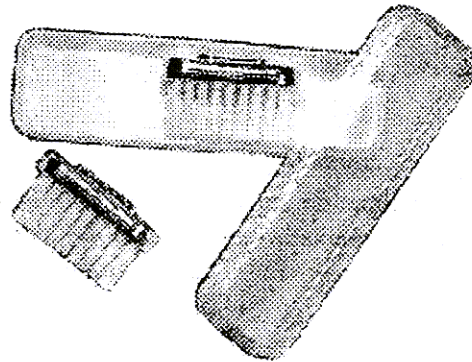
SELF-SANITIZING

Item 4337: Silver Care Plus self-sanitizing toothbrush +1 spare head with **grainy filaments**. On contact with water, the **999 pure silver** that covers the head activates a natural and continuous **self-sanitizing process**.

Available in 4 colour assortments.



Item 37: Self-sanitizing spare heads with grainy filaments for Silver Care Plus toothbrush.



GRAINY FILAMENTS

Tynex° grainy filaments have very fine granules throughout, which have the correct balance to ensure gentleness against the delicate tissue of the gums together with an effective scrubbing power (increases the removal of bacterial plaque).

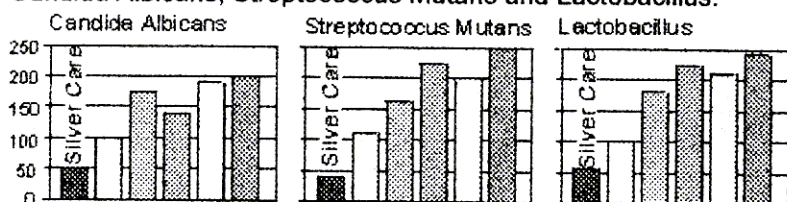


The bacteriological analyses

Antibacterial effectiveness of the toothbrush

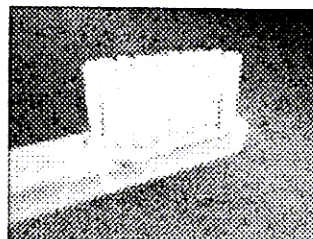
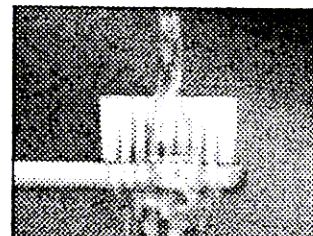


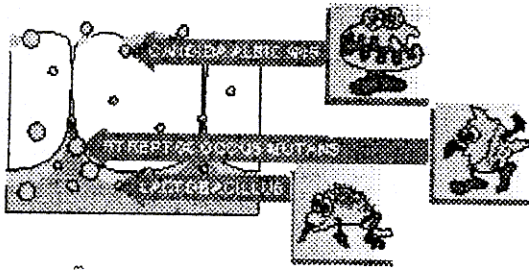
It was possible to evaluate the antibacterial power of the **Silver Care** toothbrush after in-depth bacteriological analyses - carried out by a top University laboratory: in fact, the analyses carried out compared ours with 5 other quality brands of toothbrushes (among the most well-known on the market). The self-sanitizing power of **Silver Care** was proved, in its relationship with the remaining microbic contamination level of the three main micro-organisms found in dental cavities: *Candida Albicans*, *Streptococcus Mutans* and *Lactobacillus*.



The red columns in the graphics indicate the values of the **Silver Care** toothbrush

IN CONCLUSION: The contamination found in a toothbrush head is in essence due to the fact that the micro-organisms cling to the surface of the material which makes up the bristles and the head of the toothbrush. The **Silver Care** toothbrush - by virtue of its silver-plating - has the capacity to drastically reduce the microbic contamination as clearly indicated by the graphs.





Biochemical tests of dental plaque allowed us to identify the 3 most important micro-organisms that cause dental cavities:

Candida Albicans, Streptococcus Mutans and Lactobacillus.

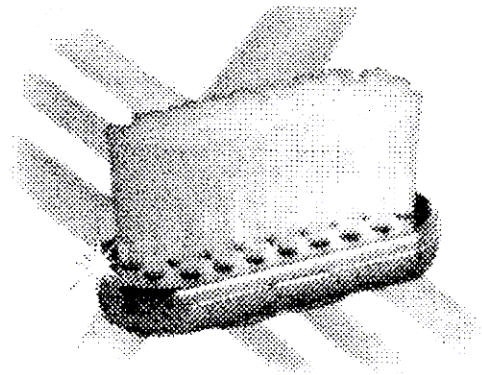


Even a correct, daily oral hygiene is not enough to fight microbic colonization, which is mainly due to the ability of the micro-organisms to adhere to the surfaces of the bristles and head of the toothbrush.

Self-sanitizing

SILVER: The idea of using Silver, a metal well-known for its antibacterial powers, was a deciding factor in the creation of the **Silver°Care** self-sanitizing toothbrush.

The replaceable head of the toothbrush is indeed in silver. **Silver°Care** action takes place when the silver, in contact with water, creates a natural and continuous sanitizing process.



The Certifications



BS5757: British Standard specifications for toothbrushes.

1. Scope

The standards specified by the BS 5757 represent, on an international level, an indispensable reference to identify the standard requirements that guarantee the excellent performance of a given manual toothbrush.

PIAVE was the first Italian company to perceive the importance of subjecting its own production to the tests prescribed by the above-mentioned standards and obtaining the relative certification.

2. Definitions

2.1 Brush: The part of the toothbrush that comprises the tufts.

2.2 Tuft: The aggregate of filaments (bristles) that are fixed in one hole in the stock.

2.3 Stock: The extension of the handle which supports the tufts.

2.4 Head: The stock and the group of tufts.

2.5 Handle: The part of the toothbrush which is not defined as the head.

2.6 Compliance: The ability of a brush to conform to the shape of a given surface contour.

2.7 Textural stiffness: The mean resultant force exerted by a bristle when the toothbrush is used.

3. Classifications

The toothbrushes may be classified in three categories according to their overall length and the width of the stock, as specified by the table.

category	type	minimum total length	maximum stock width
A	Adult	150mm	15.0mm
B	Junior	120mm	13.0mm
C	Child	100mm	11.0mm

4. General requirements

4.1 Materials: The toothbrush will be manufactured of materials free of unpleasant odours or taste.

4.2 Toxicity: The toothbrush shall not release toxic substances during normal use.

4.3 Disinfection: If natural bristle is used in the manufacture of the brush, it shall be treated to prevent the transmission of infection.

4.4 Surface Finish: All surfaces shall be finished so that they are free from sharp edges or corners which may cause injury to the user during normal use.

4.5 Handle strength: The handle shall be made of a sufficiently strong and resilient material so as not to break under normal use.

5. Requirements for the brush

5.1 Profile

5.2 Length and width

5.3 Number of tufts

5.4 Compliance

5.5 Textural stiffness grade: (extrasoft, soft, medium, hard).

5.6 Fastening of tufts

5.7 Bristles: The shape of the free ends and the filament bend recovery.

6. Requirements of the stock

6.1 Dimensions

6.2 Tuft anchorage material

7. Packaging and marking

7.1 Packaging: The toothbrush shall be suitably packed in a hygienic container to prevent contamination under normal retail handling conditions.

7.2 Marking: The handle shall be legibly marked with the manufacturer's name or trade mark. The same thing applies to the packaging, which also has to indicate the type of toothbrush, the textural stiffness grade and the number of this British Standard (BS 5757).