

CURASEPT® BIOSMALTO

SPECIFIC AND
DIFFERENTIATED
FORMULAS
BY AGE
AND NEEDS

THE EVIDENCE IS
SCIENTIFIC

FOLDER LIGHT
EDITION **05|2023**

CURASEPT[®] BIOSMALTO

A unique team of **RESEARCHERS**,
a **HUGE FINANCIAL EFFORT**,
numerous **CLINICAL TESTS**,
are the guarantee of a project that
allowed us to identify

3 innovative FUNCTIONAL SUBSTANCES

based on biomimetic, biocompatible and bioactive materials
that promote the remineralisation of enamel and dentine.



A UNIQUE APPROACH

3 PATENTS

3 FUNCTIONAL SUBSTANCES

MOUTHWASHES AND TOOTHPASTES

The two functional substances contained in toothpastes as well as in mouthwashes induce a new mineral phase that is more resistant to the attacks of acids and mechanical damage. Therefore, their application increases caries resistance, inhibits the formation of bacterial plaque, stimulates remineralisation of enamel and dentine, promoting the remineralisation of initial lesions, protects against acid erosion and, thanks to the presence of potassium salts in the Sensitive Teeth line, reduces the symptoms of dentine sensitivity.



IMPACT ACTION MOUSSE

The formula does not contain free water to prevent the amorphous phase from deactivating and crystallising. In contact with the oral environment, with saliva in particular, the **F-ACP COMPLEX** particle dissolves **IMMEDIATELY** and subsequently active ions are **RAPIDLY** released selectively in the enamel and dentine lesions, where they act by forming a new mineral phase that is more resistant than the natural one (remineralisation). The small size of the particles makes it possible to occlude the dentine tubules, with a **QUICK DESENSITISING EFFECT**.

F-ACP ●●●●●●●● COMPLEX[®]

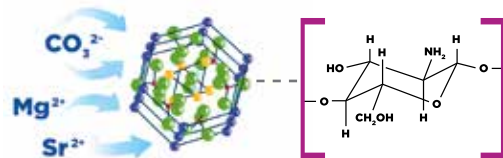


CHARACTERISTICS OF FUNCTIONAL SUBSTANCES

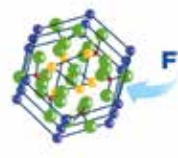
MOUTHWASHES AND TOOTHPASTES



HYDROXYAPATITE PARTIALLY SUBSTITUTED AND CONJUGATED WITH CHITOSAN.



HYDROXYAPATITE PARTIALLY SUBSTITUTED WITH FLUORIDE.



BIOMIMETIC TECHNOLOGY: mixture of HYDROXYAPATITES

- Partially substituted hydroxyapatite with Magnesium, Strontium and Carbonate CONJUGATED WITH CHITOSAN.
- Partially substituted hydroxyapatite with Fluoride.

The affinity of Chitosan with enamel promotes the release of active ions directly onto tooth surfaces.

CARBONATE
capable of making active ions bioavailable.

MAGNESIUM
promotes nucleation.

STRONTIUM
stabilises the newly formed mineral phase.

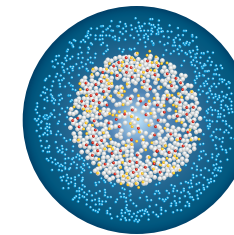
CHITOSAN
extends the release of active components.

FLUORIDE
strengthens the newly formed mineral phase.

IMPACT ACTION MOUSSE

F-ACP ●●●●●●●●
COMPLEX®

BIOINSPIRED TECHNOLOGY
NANOPARTICLE OF AMORPHOUS CALCIUM PHOSPHATE ENRICHED WITH CARBONATE AND FLUORIDE. OUTER LAYER CONSISTING OF CITRATE.



- Amorphous calcium phosphate
- Citrate
- Carbonate
- Fluoride

Amorphous Calcium Phosphate Phase - ACP - functionalised with Fluoride, Carbonate coated with Citrate.

Amorphous Calcium Phosphate (ACP) is a highly reactive non-crystalline material **THAT QUICKLY CONVERTS** into hydroxyapatite: in nature, it is the precursor of enamel and dentine.

CITRATE

It externally covers the F-ACP particles, stabilising and making the complex more biomimetic.

Citrate is useful as a buffering system to regulate acidity and neutralise the pH of a solution, therefore it neutralises the acids produced by plaque.

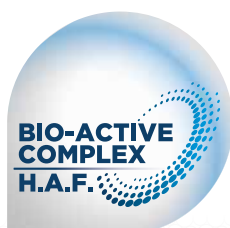
During demineralisation, i.e. when there is altered acidity in the oral cavity produced by plaque bacteria, citrate acts by restoring the conditions required to reverse the process.

CARBONATE
increases the solubility of the complex and bioavailability of active ions: Calcium, Phosphate and Fluoride.

FLUORIDE
present in free form within the complex, it contributes to the formation of Fluorapatite.

BIODIVERSITY MAKES US **UNIQUE**

CURASEPT BIOSMALTO



BIOMIMETIC ACTIVITY

The three functional substances of CURASEPT BIOSMALTO feature the same chemical, physical, morphological and mechanical properties as the biological structures found in nature (enamel and dentine) and can stimulate, in a physiological environment, similar processes to those occurring in the presence of natural biological tissue, thereby promoting the remineralisation of initial carious lesions.

BIOCOMPATIBILITY

CURASEPT BIOSMALTO has a specific biomimetic action without causing toxic effects on the biological system depositing a new mineral phase that is consistent with the pre-existing one.

BIOACTIVITY

CURASEPT BIOENAMEL has the therapeutic ability to chemically interact with the tooth's hard tissue.

THE IMPORTANT ROLE OF FLUORIDE

Fluoroprophylaxis is still considered the cornerstone of prevention.

THE ITALIAN MINISTRY OF HEALTH'S GUIDELINES PROVIDE FOR THE FOLLOWING FLUOROPROPHYLAXIS PROGRAMME:

FROM THE ERUPTION OF THE FIRST TOOTH TO 6 YEARS

Use of a toothpaste containing at least 1000 ppm fluoride twice a day, with careful adult supervision of the dose used on the toothbrush (up to 3 years as small as a grain of rice, up to 6 years as small as a lentil) because children up to the age of 6 years do not fully control swallowing.

FROM 6 YEARS OLD

Use of a toothpaste containing at least 1000 ppm fluoride twice a day. The toothpaste should be rinsed as little as possible.

These recommendations are also confirmed in the latest version of the **'National guidelines for the promotion of oral health and the prevention of oral diseases during development'**, the main recommendations of which are given below.

Sub-recommendation 1.4

Insufficient exposure to fluoride compounds is a risk factor for the onset of carious lesions.

Recommendation 2

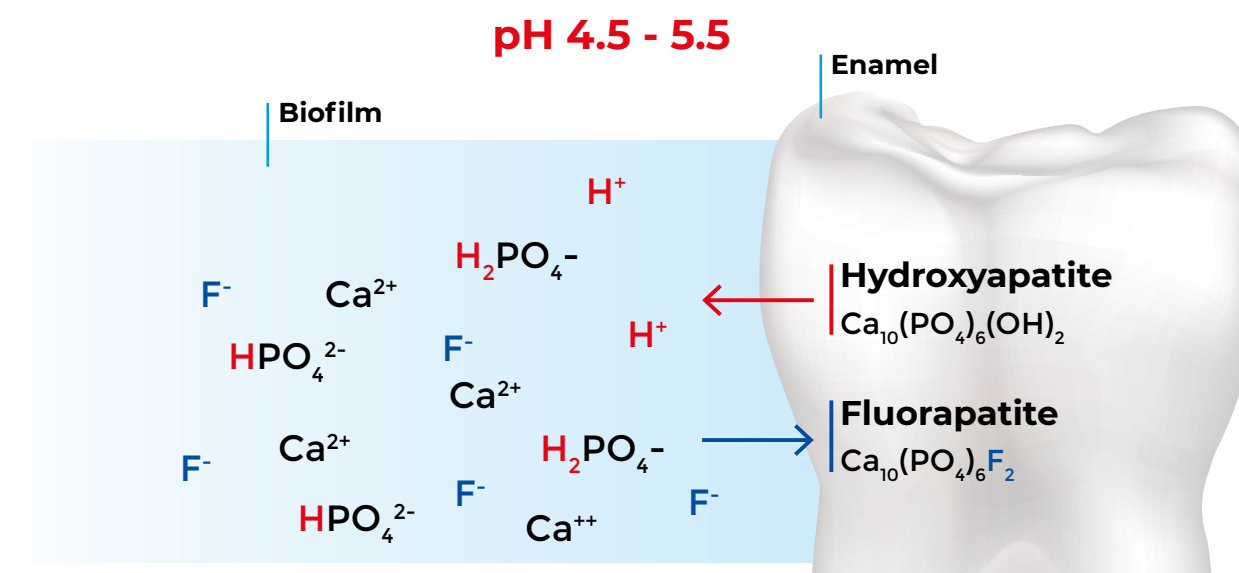
Caries prevention through the use of fluoride is necessary for all individuals.

Sub-recommendation 2.1

From 6 months to 6 years of age, fluoroprophylaxis can be carried out through the use of a toothpaste containing at least 1000 ppm fluoride, twice a day, in a pea-sized dose.

Sub-recommendation 2.2

After the age of 6, fluoroprophylaxis is carried out through the use of a toothpaste containing at least 1000 ppm fluoride, twice a day.



Demineralisation and Remineralisation in the presence of fluoride ions

In the **CURASEPT BIOSMALTO** line, fluoride is administered in the form of partially substituted hydroxyapatite (fluorohydroxyapatite). The hydroxide ions contained in the pseudo-hexagonal crystalline lattices, the most common ones in enamel, are exposed directly in the inter-prismatic surface, hence strongly attackable by the H^+ ions of oral liquids. Their substitution with fluoride ions strongly reduces the solubility of hydroxyapatite, transforming it into fluorohydroxyapatite, with monoclinic crystal lattice and therefore more stable against acid attack.

Toothpastes in the **Curasept Biosmalto Development Age Line** have Fluoride concentrations that comply with ministerial recommendations.

There is also a fluoride-free Baby Kid toothpaste in the line that has been developed for children who take fluoride systemically from other sources (drops, tablets, etc.) and consequently should not take more fluoride to avoid overdosing and problems such as fluorosis.



Baby-Kid and Junior toothpastes

PROBIOTICS AND DENTAL CARIES

Dental caries is one of the most common diseases in the world. Many risk factors and clinical conditions are associated with the progression of carious lesions, including: poor oral hygiene, a diet high in simple carbohydrates, a cariogenic microbial load, reduced salivary secretion, and poor fluoride intake.

To counteract these risk conditions, there are validated protocols and preventive measures that have proven to be effective. **One of the most recent and innovative tools is offered by probiotics.**

Probiotics are live bacterial strains that, when administered in the right dosage and formulation, provide benefits to the host and assist in the treatment or prevention of the disease.

Since carious disease, like periodontal disease, is characterised by a **dysbiosis** of the supragingival **microbiome**, the rationale for the use of probiotics is precisely to provide 'good bacteria' that can compete with cariogenic ones and maintain a balance (**eubiosis**) that counteracts the triggering of changes in the oral flora that lead to the onset of the carious lesion.

The literature in recent years has studied various probiotic strains (mainly Bifidobacteria and Lactobacilli) and observed how **regular supplementation of the diet with these bacterial strains reduces the risk of caries by lowering the share of cariogenic bacteria**, which are replaced by harmless commensal bacteria.

This beneficial action of probiotics is due to the following mechanisms:

- **The ability to reduce salivary acidity, bringing the pH back to physiological values more quickly.**
- **The production of bacteriocins and enzymes (urease, dextranase, mutanase) that antagonise the biofilm.**
- **The ability to compete with other pathogens for adhering to and colonising tooth surfaces.**
- **The ability to protect mucous membranes from inflammation.**

By virtue of the extreme reliability and safety of these products, they are a promising preventive weapon that practitioners should add to their clinical protocols.

PREVENTION AND TREATMENT OF CARIES, ABRASION AND EROSION.

It is a dietary supplement capable of interfering with the proliferation of the cariogenic biofilm and thus limiting the degradation of enamel and dentin.

It boasts an exclusive combination of probiotic bacteria and vitamins:

- **Bacillus coagulans BC4 (LMG S-27484):**

it aggregates with other bacteria in the biofilm and competes with the most aggressive bacteria, hindering their proliferation and reducing their numbers. It also produces metabolites that can influence the activity of cariogenic bacteria, reducing their damaging action on enamel and dentine.

- **B complex vitamins:**

they influence the metabolic pathways of carbohydrates and contribute to the normal function of the immune system.

CURASEPT BIOSMALTO PROBIOTIC

FOOD SUPPLEMENT 14 chewable tablets

*Bacillus coagulans BC4, Vitamin B6,
Vitamin B12, Folic Acid.*

Daily Use. It rebalances the oral microbiota and preserves the health of the gum tissue and oral mucosa.

Take 1 or 2 tablets daily on an empty stomach for 30 days. Repeat the treatment after two months.

Recommended in combination with Curasept Biosmalto Caries Abrasion & Erosion Mousse, Toothpaste and Mouthwash.



SCIENTIFIC EVIDENCE

Effectiveness of HAF Toothpastes in children. A 2-years triple-blind RCT.

AUTHORS: Maria Grazia Cagetta, Fabio Cocco^a, Richard Johannes Wierichsc, Thomas Gerhard Wolfc,d, William Campusb,c,e

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^e School of Dentistry, Sechenov University, 119991 Moscow, Russia

AIM OF THE TRIAL:

The aim of this randomised clinical trial was to compare in a pre-school and school age population the preventative efficacy of toothpastes containing a biomimetic hydroxyapatite (HA) complex and fluoride to traditional fluoridated toothpastes with regard to dental caries.

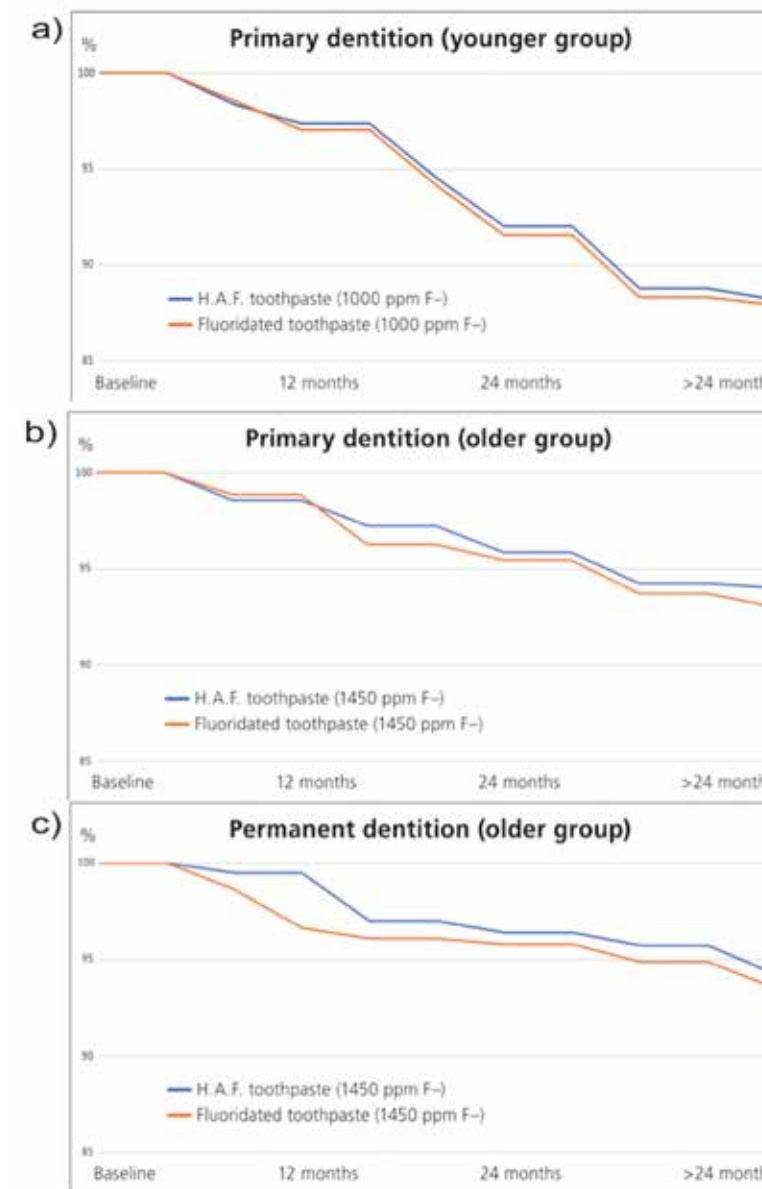
MATERIALS AND METHODS:

A total of 610 children (aged 4–5 and 6–7 years) were enrolled in the trial and divided into two groups according to age, a younger group, 4–5 years at baseline, (Gyoung) and an older group, 6–7 years at baseline (Gold). Four toothpastes were used for the trial, two containing fluoride-enriched hydroxyapatite (HAF) (with respective concentrations of 1000 and 1450 ppmF), hydroxyapatite substituted with magnesium, strontium and carbonate in a chitosan matrix, and two traditional fluoridated toothpastes (1000 and 1450 ppmF). Toothpastes with a concentration of 1000 ppmF were randomly administered for 24 months to the youngest group of children (Gyoung) and toothpastes with 1450 ppmF to the oldest group of children (Gold). The children were instructed to brush their teeth with the toothpastes for two minutes three times a day.

The International Caries Detection and Assessment System (ICDAS) was used to record initial cavities (enamel lesions), moderate cavities (pre/micro-cavitated lesions) and severe cavities (dentine lesions). The examination was subsequently repeated after 12 and 24 months. Treatment efficacy was assessed by calculating the reduction in risk ratio (RR) and number needed to treat (NNT).

RESULTS:

Overall, 518 patients (268 Gyoung and 250 Gold) finished the trial with a drop-out rate of 11.84% and 17.22% for Gyoung and Gold, respectively. At the last assessment (24 months), the increase of caries in deciduous dentition was statistically significantly lower in subjects using H.A.F. toothpastes, compared to the traditional fluoridated arms (0.18 vs. 0.27 $p=0.04$ in Gyoung and 0.16 vs. 0.30 $p=0.01$ in Gold for severe lesions). In permanent dentition, the increase in caries was statistically lower in the HAF arm for both initial and severe lesions (0.09 vs. 0.17 $p=0.02$ and 0.18 vs. 0.28 $p=0.01$, respectively) in the group of older children (Gold).



WHAT DO WE LEARN FROM THIS STUDY?

Overall, this randomised clinical trial showed that BIOSMALTO toothpastes (with both 1000 and 1450 ppm Fluoride), and traditional fluoridated toothpastes with 1450 ppmF only were effective in the prevention and in the progression of carious lesions.

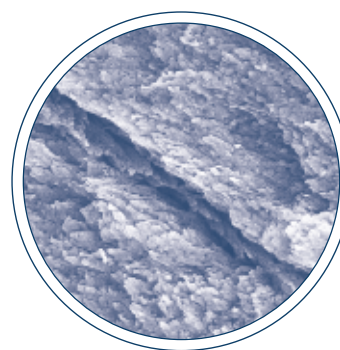
The study showed that after 24 months of use, BIOSMALTO toothpastes containing Bio-Active Complex and HAF were more effective in both age groups in preventing the onset of caries than toothpastes with the same concentration of fluoride in the form of sodium monofluorophosphate.

The best effectiveness in preventing caries was found on deciduous teeth and permanent teeth for both initial and severe lesions.

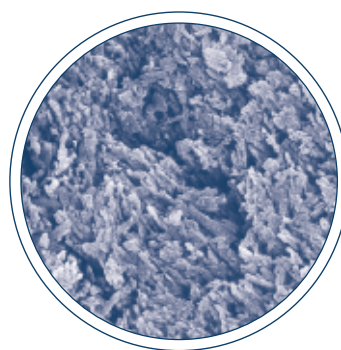
CURASEPT[®] BIOSMALTO

CARIES ABRASION & EROSION

ACTS EFFECTIVELY
ON THE DAMAGE
CAUSED BY
ABRASION AND
EROSION AND
CREATES A NEW,
MORE RESISTANT
MINERAL PHASE.



DEMINERALISED TOOTH*



TOOTH* TREATED WITH BIOSMALTO

*Demineralised surface. Data on file. SEM scanning electron microscope magnification. Compared to the untreated tooth, the surface of the tooth treated with toothpaste appears covered with a layer of newly formed material of considerable consistency and thickness.



IMPACT ACTION MOUSSE

Contains 1450 ppm F⁻
150 ml
Flavours: Delicate Mint - Strawberry

- Quickly re-mineralises enamel and dentine even if highly demineralised.
- Increases resistance to acid, mechanical and bacterial attacks.
- Indicated in subjects with carious lesions, high wear of tooth surfaces and dry mouth.
- Ideal during and after orthodontic and whitening treatments.
- Adjuvant in the treatment of white spots and MIH.



IMPACT ACTION MOUSSE

Contains 1450 ppm F⁻
50 ml
Flavours: Delicate Mint - Strawberry

- Indicated for continuing the professional treatment carried out in the dentist's office.
- Ideal for the prevention and treatment of dental lesions in patients at a higher risk of caries, erosions and abrasions, always combined with a toothpaste from the Caries Abrasion & Erosion line.

Apply the mousse with a Curasept Single-Tufted brush.



They are Medical Devices Read the warnings and instructions for use carefully.

MOUTHWASH

Contains 250 ppm of F⁻
300 ml

-  **Firmly re-mineralises enamel and dentine.**
-  **Protects against acid erosion and abrasion.**
-  **Prevents sensitivity.**
-  **Prevents cavities* and inhibits plaque formation.**

Possibly use in combination with the BIOSMALTO CAVITIES ABRASION & EROSION TOOTHPASTE.

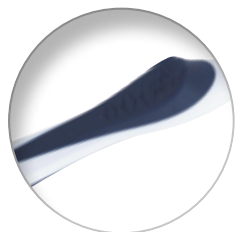


PROTECTION TOOTHBRUSH

Blister pack with 1 toothbrush

- The soft, thin, flexible bristles break down the bacterial plaque on the very first pass, without bruising the enamel and dentine. Bristle diameter 0.15 mm.
- Specially designed to preserve the newly formed re-mineralised layer following the use of Curasept Biosmalto toothpastes and mousses.
- Small, atraumatic and compact head to reach every corner of the mouth.
- Ergonomic and flexible handle for easier brushing.

Recommended in combination with CURASEPT BIOSMALTO Caries Abrasion & Erosion mouthwashes and toothpastes.



TOOTHPASTE

Contains 1450 ppm of F⁻
Low abrasiveness <56
75 ml

-  **Firmly re-mineralises enamel and dentine.**
-  **Protects against acid erosion and abrasion.**
-  **Prevents sensitivity.**
-  **Prevents caries* and plaque formation.**

Use if possible in combination with BIOSMALTO MOUTHWASH Caries Abrasion & Erosion.



*In combination with mechanical oral hygiene procedures and a diet poor in carbohydrates.

They are Medical Devices  Read the warnings and instructions for use carefully.

TOOTHPASTE

Junior 7-12 years

Contains 1450 ppm of F⁻
Low abrasiveness <30
75 ml
Tutti Frutti flavour



- Prevents caries* and inhibits the formation of plaque in milk and permanent teeth.
- Protects and firmly re-mineralises the hard tissues of newly-formed teeth.
- Protects against acid erosion and abrasion.
- Prevents sensitivity.

TOOTHPASTE

BABY- KID (6 months - 6 years)

Contains 1000 ppm of F⁻
Low abrasiveness <30
50 ml
Flavours: Strawberry - Delicate Mint



- Prevents cavities* of primary teeth.
- Promotes the healthy development of permanent teeth.
- Protects and firmly re-mineralises enamel and dentine.
- Protects against acid erosion and abrasion.
- FLUORIDE-FREE also available.
Ideal for children who take a Fluoride supplement.

*In combination with mechanical oral hygiene procedures and a diet poor in carbohydrates.

They are Medical Devices  Read the warnings and instructions for use carefully.

JUNIOR TOOTHBRUSH



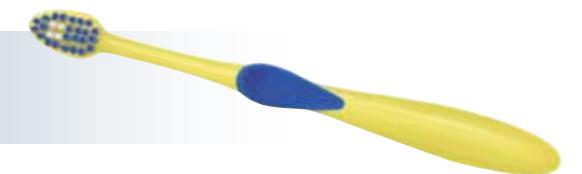
Blister pack with 1 toothbrush

- Specially created for children aged 7 to 12. Brushing helps prevent caries by effectively removing plaque.
- The flexible and compact bristles allow you to clean the surfaces of deciduous and permanent teeth without damaging them.
- The different colour of the inner bristles indicates the correct amount of toothpaste to use on the toothbrush.
- Available in Blue and White and White and Blue bristle colours.

Recommended in combination with CURASEPT BIOSMALTO toothpastes
Caries Abrasion & Erosion.



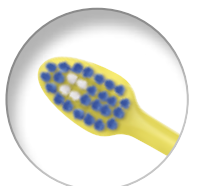
KID TOOTHBRUSH 3-6 YEARS



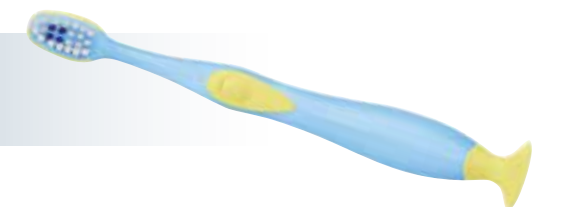
Blister pack with 1 toothbrush

- The extremely soft, flexible bristles protect the gums and teeth from plaque.
- The central bristles indicate the right dose of toothpaste to be used.
- The small, rounded head reaches every corner of the mouth.
- The coloured rubber on the handle ensures the proper grip.
- Available in 4 colours.

Recommended in combination with CURASEPT BIOSMALTO toothpastes
Caries Abrasion & Erosion.



BABY TOOTHBRUSH 0-3 YEARS



Blister pack with 1 toothbrush

- The extremely soft, flexible bristles protect the gums and teeth from plaque.
- The coloured bristles indicate the right dose of toothpaste to be used.
- The small, rounded head is covered with soft rubber to ensure maximum gentleness. A handy suction cup lets you set the toothbrush upright.
- Available in 2 colours.

Recommended in combination with CURASEPT BIOSMALTO toothpastes
Caries Abrasion & Erosion.





CLINICAL SITUATION	OFFICE 	HOME 				HOW TO USE THEM AND FOR HOW LONG
	PROFESSIONAL MOUSSE	HOME MOUSSE	TOOTHPASTE	MOUTHWASH*	PROBIOTIC	
HIGH SUSCEPTIBILITY TO 						Professional Mousse: single application with tray for 3-5 minutes at the end of each session. Home Mousse: apply with a single-tufted toothbrush daily twice a day after brushing, without interruption at least until removal or adequate control of risk factors for caries by the dentist. Caries Abrasion & Erosion Toothpaste and Mouthwash: depending on the age of the patient, they should be used daily without interruption, before using the Home Mousse. Probiotic: take 1 or 2 tablets daily on an empty stomach for 30 days. Repeat the treatment after two months.
FIXED AND MOBILE ORTHODONTIC TREATMENTS 						Home Mousse: apply with a single-tufted toothbrush daily twice a day after brushing, without interruption at least for 30 days after removal of the orthodontic devices. Caries Abrasion & Erosion Toothpaste and Mouthwash: depending on the age of the patient, they should be used daily without interruption in combination with the Home Mousse. Probiotic: take 1 or 2 tablets daily on an empty stomach for 30 days. Repeat the treatment after two months.
WHITE SPOTS 	ACTIVE LESIONS (OPAQUE APPEARANCE AND POROUS SURFACE)					Professional Mousse: single application with tray for 3-5 minutes at the end of each professional hygiene session. Home Mousse: apply with a single-tufted toothbrush daily 2 to 5 times a day, without interruption for at least 90 days, re-evaluating the lesions (via photographs) every 30 days. If the appearance of the lesions does not change in the first 90 days, continue the treatment on a daily basis without interruption. Caries Abrasion & Erosion Toothpaste and Mouthwash: choose the version according to the patient's age, they should be used daily without interruption in combination with the Home Mousse. Probiotic: take 1 or 2 tablets daily on an empty stomach for 30 days. Repeat the treatment after two months.
						
	INACTIVE LESIONS (GLOSSY APPEARANCE AND SMOOTH SURFACE)					
						Caries Abrasion & Erosion Toothpaste and Mouthwash: depending on the patient's age, they should be used daily without interruption. Probiotic: take 1 or 2 tablets daily on an empty stomach for 30 days. Repeat the treatment after two months.
DENTAL EROSION AND ABRASION 						Professional Mousse: apply with the special tray for 3-5 minutes before the session to reduce sensitivity during procedures, followed by a second application at the end of the session. Home Mousse: apply with a single-tufted toothbrush daily twice a day after brushing, without interruption to limit the progression of the lesions. As an alternative, cycles of 30-60 days can be carried out after each periodic professional hygiene session. Caries Abrasion & Erosion Toothpaste and Mouthwash: they must be used daily, in combination with the Home Mousse.
MIH HYPO-MINERALISATION 	POST-ERUPTIVE PHASE					Professional Mousse: apply with the special tray for 3-5 minutes before the session to reduce sensitivity during procedures, followed by a second application at the end of the session. Home Mousse: apply with a single-tufted toothbrush, use daily 2 to 5 times a day without interruption up to 2-3 years after eruption of the tooth (maturation period). It is possible to make a special tray to wear for a maximum of 20 minutes, then remove the tray without rinsing. Combine with Caries Abrasion&Erosion Toothpaste and Mouthwash starting 1-2 weeks before the treatments. Probiotic: take 1 or 2 tablets daily on an empty stomach for 30 days. Repeat the treatment after two months.
						
	MAINTENANCE PHASE					
						Home mousse: apply daily with a single-tufted toothbrush only on the lesion at least twice a day as maintenance therapy for about 30 days after each professional recall session. Caries Abrasion&Erosion Toothpaste and Mouthwash: chosen according to the patient's age, they should be used daily without interruption, before the Mousse. Probiotic: take 1 or 2 tablets daily on an empty stomach for 30 days. Repeat the treatment after two months.

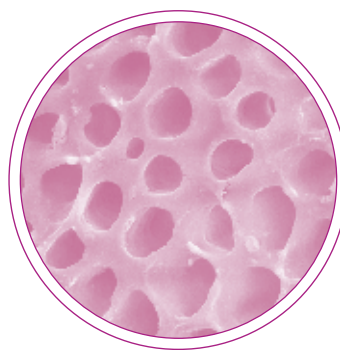
*To enhance the benefits of Biosmalto toothpaste, the patient may be advised to use Biosmalto mouthwash to rinse their mouth after brushing, instead of rinsing with water, which reduces the beneficial effects.

Depending on their origin and severity, some of the problems can be solved by combining the use of Curasept Biosmalto Mousse with multidisciplinary treatments.

CURASEPT[®] BIOSMALTO

SENSITIVE TEETH

CREATES A NEW
MINERAL PHASE
MORE RESISTANT
TO ACID ATTACKS.
QUICKLY REDUCES
SENSITIVITY
THANKS TO
POTASSIUM SALTS.



DEMINERALISED TOOTH*



TOOTH* TREATED WITH BIOSMALTO

*Demineralised surface. Data on file. Under the microscope, the surface of the tooth treated with toothpaste appears to be covered with a layer of newly formed material of considerable consistency, capable of occluding the dentinal tubules.



IMPACT ACTION MOUSSE

Contains 1450 ppm of F⁻
150 ml
Tutti Frutti flavour



- 🦷 Quickly reduces pain.
- 🦷 Occludes dentine tubules.
- 🦷 Protects against sensitivity over time.
- 💡 Quickly re-mineralises enamel and dentine.



IMPACT ACTION MOUSSE

Contains 1450 ppm of F⁻
50 ml
Tutti Frutti flavour



- Indicated for continuing the professional treatment carried out in the dentist's office.
- Ideal for the prevention and treatment of enamel-dentine lesions in patients with high sensitivity, always in combination with a toothpaste from the Sensitive Teeth line.

Apply the mousse with a Curasept Single-Tufted brush.

MOUTHWASH

Contains 250 ppm of F⁻
300 ml

- 🦷 Quickly reduces pain.
- 🦷 Occludes dentine tubules.
- 🦷 Protects against sensitivity over time.
- ☀️ Firmly re-mineralises enamel and dentine.

*If possible, use in combination
with BIOSMALTO Sensitive Teeth toothpaste.*



TOOTHPASTE

Contains 1450 ppm of F⁻
Low abrasiveness <15
75 ml

- 🦷 Quickly reduces pain.
- 🦷 Occludes dentine tubules.
- 🦷 Protects against sensitivity over time.
- ☀️ Firmly re-mineralises enamel and dentine.

*If possible, use in combination
with BIOSMALTO Sensitive Teeth Mouthwash.*



SENSITIVE TOOTHBRUSH

Blister pack with 1 toothbrush

- Tapered bristles with more flexible tips, which effectively break down the bacterial plaque without traumatising the gums and without abrading enamel and dentine. Resistant and hygienic, they do not retain fluids and bacteria. Bristle diameter 0.17 mm base, 0.01 mm tip.
- Specially designed for those with tooth sensitivity and delicate gums.
- Small, atraumatic and compact head to reach every corner of the mouth.
- Ergonomic, flexible handle for easier brushing.

*Recommended in combination with mouthwashes and toothpastes
CURASEPT BIOSMALTO Sensitive Teeth.*





SITUATION CLINIC	OFFICE	HOME			HOW TO USE THEM AND FOR HOW LONG
	PROFESSIONAL MOUSSE	HOME MOUSSE	TOOTHPASTE	MOUTHWASH*	
DENTINAL HYPERSENSITIVITY 	HIGH SENSITIVITY				Professional Mousse: apply with the special tray for 3-5 minutes before the session to reduce sensitivity during procedures, followed by a second application at the end of the session. Home Mousse: apply with a single-tufted toothbrush twice a day after brushing, for cycles of at least 15-30 days. Sensitive Teeth Toothpaste and Mouthwash: use for daily hygiene before applying the Home Mousse.
	MILD SENSITIVITY				Home Mousse: apply with a single-tufted toothbrush once or twice a day, for 30 days as maintenance after each scheduled professional recall session. Sensitive Teeth Toothpaste and Mouthwash: use daily twice a day, before applying the Home Mousse.
WHITENING 	HIGH SENSITIVITY				Professional Mousse: single application with tray for 3-5 minutes after the whitening treatment. Sensitive Teeth Toothpaste and Mouthwash: use daily twice a day, starting as early as 2 weeks before the whitening treatment to prevent the onset.
	MILD SENSITIVITY				Sensitive Teeth Toothpaste and Mouthwash: use daily twice a day, at the end of the shock treatment with Mousse or however in case of mild sensitivity.
FLUOROSIS 	ATTACK PHASE				Professional Mousse: single application with a tray for 3-5 minutes directly on the affected areas and at the end of the professional hygiene sessions. Sensitive Teeth Toothpaste and Mouthwash: use daily twice a day, without interruption.
	MAINTENANCE PHASE				Sensitive Teeth Toothpaste and Mouthwash use daily twice a day, without interruption.
EROSION AND ABRASION WITH EXPOSURE OF DENTINE OR ROOTS 					Home Mousse: apply with a single-tufted toothbrush twice a day after brushing, taking care to cover the exposed dentine areas. Cycles of 30-60 days after each periodic hygiene and check-up session. Sensitive Teeth Toothpaste and Mouthwash: use daily twice a day, without interruption.
GINGIVAL RECESSIONS 	HIGH SENSITIVITY				Professional Mousse: Apply selectively to the areas affected by recessions for 3-5 minutes before the session to reduce sensitivity during procedures, followed by a second application with a specific tray at the end of the session. Home Mousse: apply with a single-tufted toothbrush twice a day after brushing, for cycles of at least 30 days after each periodic hygiene and check-up session. Sensitive Teeth Toothpaste: use for daily hygiene before applying the Home Mousse.
	MILD SENSITIVITY				Sensitive Teeth Toothpaste and Mouthwash: use daily twice a day, at the end of the shock treatment with the Mousse without interruption. Home Mousse: apply with a single-tufted toothbrush twice a day after brushing, for cycles of at least 30 days after each periodic hygiene and check-up session.

*To enhance the benefits of Biosmalto toothpaste, the patient may be advised to use Biosmalto mouthwash to rinse their mouth after brushing, instead of rinsing with water which reduces the beneficial effects.

Depending on their origin and severity, some of the problems can be solved by combining the use of Curasept Biosmalto Mousse with multidisciplinary treatments.

CLINICAL CASES

HYPOMINERALISATION OF PERMANENT MOLARS AND INCISORS

CLINICAL CASE

SALVATORE CANNIZZARO - DENTAL HYGIENIST

PATIENT AGE

15 YEARS

REASON FOR VISIT

An under-age, female patient, who underwent a fixed orthodontic treatment, completed approx. 18 months before, came to the office accompanied by her mother for a six-monthly recall of professional oral hygiene.

OBJECTIVE EXAMINATION AND DESCRIPTION OF THE CLINICAL SITUATION OBSERVED

During the objective examination, with the help of an SLR for dental macrophotography, white spot lesions are detected (WSL) from MIH on teeth 2.1, 3.2, 3.6 and 4.6 classified ICDAS-II type 2, and one brown spot lesion (BSL) from amelogenesis imperfecta

(AI) on tooth 1.3 (Fig. 1). The documentation in the folder shows that these lesions were already present even before orthodontic treatment. A closer examination reveals that...(FIG. 1 Initial clinical situation.)

The WSL on tooth 2.1 has two superimposed lesions, a superficial WSLs one due to orthodontic therapy and a deep one from MIH. The latter, as well as the lesion of tooth 3.2, has progressed positively towards the surface of the enamel, making it suitable for combined treatment for WSL. This is shared with the patient who at this point communicates her discomfort due to these 'white spots' and the presence of dental sensitivity. The possibility to intervene on these lesions through a new approach with innovative products in a minimally invasive manner, being able to restore her smile, both in terms of aesthetics and health, is also explained to her mother. We also explain that the BSL of tooth 1.3 will not have significant aesthetic effects, but it will still need to be treated to prevent it from worsening.



FIG. 1 INITIAL CLINICAL SITUATION

THERAPIES UNDERTAKEN PREVIOUSLY



FIG. 2

After completion of the fixed orthodontic treatment, the patient started using whitening toothpastes with the aim of camouflaging the enamel lesions.



FIG. 2 Clinical situation after treatment.
FIG. 3 Colour detection with Spectro Shade.
A, B, C: colour before treatment.
D, E, F: colour after treatment.

TREATMENT PLAN:

- **PREPARATION**
- **THERAPY (DESCRIPTION AND NAME OF PRODUCTS USED, DURATION OF THERAPY, NUMBER OF APPLICATIONS)**
- **SIDE EFFECTS IF OBSERVED**

- To the customised and shared Tailoring brushing Technique that the patient has been using for some time now, we apply a customized home remineralisation protocol.
- A box of Curasept Biosmalto Intensive Action Caries, Abrasion, Erosion Mousse is delivered accompanied by an explanatory leaflet so that even at home the patient may be able to repeat the operation without any difficulty. We ask her to apply the mousse twice a day, morning and evening, on the surfaces to be treated and leave it on for as long as possible. In any case, the first application is made in the office so as to allow the patient to learn well all the steps, understand the quantity to be applied, the most correct technique for her needs and be able to clarify any doubts. In combination with the mousse, we recommended the use of Curasept Biosmalto Caries, Abrasion, Erosion toothpaste three times a day.
- Neither the operator nor the patient observe any side effects.

**THERAPY OUTCOME
AND PROGRESS OBSERVED
AT THE VARIOUS INTERVALS**

At follow-up after one month (T1) we observe an improvement of the WSL on incisor 2.1. In fact, while at the first visit (T0) the WSL of incisor 2.1 presented as two superimposed lesions, a deep one and a superficial one, at the check-up after one month a reduction of the outermost lesion was noted. In accordance with the patient it is decided to continue with this therapy. At the second follow-up, after another month (T2), it is observed that the WSL of incisor 2.1 decreased further and sensitivity has disappeared. Indeed, there is only a deep lesion (MIH) while the outermost one from orthodontic treatment is camouflaged. The WSL of tooth 3.2 and the BSL of tooth 1.3 however, show no change. It is decided however to proceed with the same protocol for another month. On the third follow up, always after one month (T3), it is observed that there is no change.

FIG. 4 Smile of the patient at the end of the treatment.

FIG. 5 Follow-up at 5 months.



In the WSL and we decide, in agreement with the patient and her mother, to continue with a new combined therapeutic approach. In this case the therapy involves the addition of three technologies: bleaching, micro-abrasion and infiltration. It is indeed thanks to the synergy of these four technologies that we are able to successfully treat the deepest and largest WSLs (Fig. 2). After the end of in-office therapy, the colour of the treated teeth is observed again and the results are compared with the initial ones (Fig. 3). The comparison shows that: incisor 2.1 does not show major changes in dentinal colour, maintaining shade A1 of the Vita scale; incisor 3.2 shows a more even overall dentin shade C1 to A1 with an improvement of 4 shades; canine 1.3 appears more even, going from shade A3.5 to D3 improving by 2 shades. To complement the treatment and until the subsequent 7-day follow-up, the patient continues applying the Biosmalto Mousse over the entire anterior sector and first molars where the WSLs are present.

FIG. 6 Comparison before and after treatment at 5 months.



**AGREED MAINTENANCE PLAN:
RECALL INTERVALS,
MONITORING**

During the first follow-up the result obtained appears stable, moreover the patient reports she has experienced no discomfort and no longer feels dentinal sensitivity. The patient continued repeating monthly check-ups, regular professional oral hygiene on a six-monthly basis and shows all her satisfaction for the results obtained (Fig. 4). Five months later we repeat a session of professional oral hygiene and, through a photographic survey, we assess the health of the enamel, which is found to be stable (Fig. 5). By using re-mineralising products, mild WSLs can regress in few weeks. However, the remineralisation mechanism in the surface layer of the enamel is unable to improve the aesthetic and structural properties of deeper lesions. One also must take into account the needs of the patient and their propensity to follow the home therapy indicated by the dental hygienist.

**HAVE ORAL HYGIENE
TECHNIQUES BEEN
MODIFIED?**

The patient already had a good oral hygiene routine at home. (FIG. 6B)

ENAMEL HYPOMINERALISATION

CLINICAL CASE

ERIKA CIRILLO - DENTAL HYGIENIST

PATIENT AGE

13 YEARS

REASON FOR VISIT

She comes to our attention after a post-orthodontic pathway with multibracket therapy for a professional oral hygiene session and an evaluation of the hard and soft tissues of the oral cavity.

OBJECTIVE EXAMINATION AND DESCRIPTION OF THE CLINICAL SITUATION OBSERVED

After a proper anamnesis and careful clinical evaluation, we explain to the patient and the parent that the teeth have an anomaly of enamel structure referred to as endogenous hypomineralisation localised at the level of the cervical third.

THERAPIES UNDERTAKEN PREVIOUSLY

The patient reports that she has never received instructions about the use of specific products for the problem observed. At the time of the visit she says that she performs oral hygiene procedures at home with manual toothbrush and toothpastes containing fluoride.

TREATMENT PLAN:

- PREPARATION
- THERAPY (DESCRIPTION AND NAME OF PRODUCTS USED, DURATION OF THERAPY, NUMBER OF APPLICATIONS)
- SIDE EFFECTS IF OBSERVED

A treatment plan is set up including a professional oral hygiene session, creation of individual heat-moulded trays withintraoral scanner and a medical record is filled in with oral characteristics, the presence and location of the hypomineralisations, VPI (Visible Plaque Index %), GBI (Gingival Bleeding Index %) and NRS Scale 0-10 (Numerical Rating Scale).

Structure anomalies are ranked according to the ICDAS score with a score from 1 to 6. A set of 3 intraoral photographs was taken with mouth opener.

In a session dedicated to the patient, instructions were provided on the maintenance of an oral hygiene routine with instructions on how to use an electric toothbrush with oscillating-rotating technology with specific head in combination with dental floss, excluding the use of mouthwash and chewing gum. At the same appointment, materials were handed and explanations were provided on how to apply the Biosmalto® Caries Abrasion & Erosion Mousse. It was recommended to use the Biosmalto® Caries Abrasion & Erosion Toothpaste. The patient was informed about the use of the products: the toothpaste had to be used every time, while the mousse had to be applied inside the heat-moulded trays after cleaning them. The presence of water in the heat-moulded trays was indispensable to achieve the desired effect.

This protocol required to be applied for 6 months continuously with 30-minute applications twice a day. The patient reported no complaints and/or adverse effects during the home therapy period.

THERAPY OUTCOME AND PROGRESS OBSERVED AT THE VARIOUS INTERVALS

The first re-evaluation of the patient took place after 30 days of using the mousse with measurement of clinical parameters and indices, motivation and photographic documentation. The patient noted improvements in her clinical condition during treatment and, upon revaluation, the reduction of enamel defects was confirmed by the clinical parameters. We observed a reduction in the ICDAS index from the initial score of 2 to a score of 1. Re-evaluation took place at 1 month, at 3 months and at 6 months and at each appointment the clinical parameters and indices were measured and photographic documentation was taken to assess the progress of enamel defects.



FIG. 1 T0: first visit post tartar ablation.



FIG. 2 T1: 30-day check after using Biosmalto mousse and Biosmalto caries abrasion& erosion toothpaste.



FIG. 3 T2: check at 60 days after using Biosmalto mousse and Biosmalto caries abrasion&erosion toothpaste.



FIG. 4 T3: check 180 days after starting to use the Biosmalto mousse and Biosmalto caries abrasion& erosion toothpaste.

TEMPORARY SOLUTION TO ENAMEL DEFECTS IN PAEDIATRIC PATIENT

CLINICAL CASE

SERGIO SANTANGELO - DENTAL HYGIENIST

PATIENT AGE

14 YEARS

REASON FOR VISIT

The patient comes to our observation for a professional oral hygiene session complaining of aesthetic discomfort because she has always had two large white spots in teeth 11 and 21 and asks if it is possible to solve this problem.



FIG. 1

FIG. 1 Intraoral view of the defect at the first visit



FIG. 2

FIG. 2 Extra-oral view of the smile at the first visit.



FIG. 3

FIG. 3 Detail of the defect at the first visit.



FIG. 4

FIG. 4 Detail of the defect at 6-month follow-up.



FIG. 5

FIG. 5 Detail of the defect at 12-month follow-up

OBJECTIVE EXAMINATION AND DESCRIPTION OF THE CLINICAL SITUATION OBSERVED

On objective examination the patient presented with excellent periodontal and dental health. There only was a small enamel defect in tooth 23 in addition to those already highlighted in teeth 11 and 21, present from birth and of probable traumatic origin since her parents reported that at the age of 4, the girl suffered a trauma on the deciduous upper incisors.

THERAPIES UNDERTAKEN PREVIOUSLY

In the past, no treatment with specific toothpastes or mousses had been undertaken or recommended. The only therapeutic proposal was to wait the age of majority to resolve the blemish with two ceramic veneers on teeth 11 and 21 (a solution that currently satisfies neither the patient nor the parents due to the invasiveness of the treatment). Following a proper anamnesis and careful clinical evaluation, it was explained to the patient that it is a trauma-induced enamel hypomineralisation and that at the moment it is only possible to approach using remineralising products and that upon reaching adulthood it will be possible to try a combined technique (professional bleaching and infiltration) to improve the blemish.

TREATMENT PLAN:

• PREPARATION

• THERAPY (DESCRIPTION AND NAME OF PRODUCTS USED, DURATION OF THERAPY, NUMBER OF APPLICATIONS)

• SIDE EFFECTS IF OBSERVED

- Initial visit.
- Professional oral hygiene with GBT technique.
- Deeming it unsuitable because of the patient's age to use heat-moulded trays, it was explained how to apply Biosmalto Caries Abrasion & Erosion Mousse, performing a single application per day, after thoroughly brushing her teeth, taking care not to drink nor eat for the next 30 minutes.
- Clinical and photographic check every 3 months and re-evaluation.
- GBT session every 6 months according to the risk profile.
- During treatment, the patient reported no side effects.

THERAPY OUTCOME AND PROGRESS OBSERVED AT THE VARIOUS INTERVALS

The photos at T0 highlight how the blemish present in teeth 11 and 21 is particularly unpleasant for the patient (Fig. 1,2). The images at follow-up at 6 and 12 months (Fig. 4,5) show the satisfactory result of the re-mineralising treatment with an improvement of the enamel lesion that today covers a smaller area and a reduction of the general opacity of the lesion with increased translucence.

AGREED MAINTENANCE PLAN

With the patient, it was agreed to carry out a professional support therapy on a six-monthly basis. At home, the patient continues to use the Curasept Biosmalto Caries Protection Toothpaste twice a day and Curasept Biosmalto Protection Caries and Erosion Mousse once a day. The result of the treatment to date is satisfactory while waiting to be able to perform, upon reaching the age of majority, the professional home whitening treatment and possibly infiltration with resins with low molecular weight.

HAVE ORAL HYGIENE TECHNIQUES BEEN MODIFIED?

The patient switched to daily use of the oscillating-rotating electric toothbrush. In addition, the patient used non-specific toothpastes before the treatment and today, with the home products that she uses regularly (mousse and specific toothpaste) she correctly preserves the surface of the enamel and prepares the enamel for more complex treatments once she turns 18. A marked improvement was also noted in the patient's degree of collaboration, also thanks to involvement in the therapy and the results achieved so far.

FROM RESEARCH TO CLINICAL PRACTICE: OF CURASEPT BIOSMALTO

CLINICAL CASE

Dr. NICOLE ANDREOLLI

PATIENT AGE

15 YEARS

REASON FOR VISIT

Scheduled oral hygiene session after fixed orthodontic therapy.

OBJECTIVE EXAMINATION AND DESCRIPTION OF THE CLINICAL SITUATION OBSERVED

- The examination of the lips, tongue, floor of the mouth and palate shows no lesions
- Healthy, pale pink gums, orange-peel appearance, presence of pinkish interproximal papillae of the right size
- Absence of sites with pathological probing
- Absence of bleeding
- Absence of plaque (PI 0%)
- Absence of recessions
- Presence of numerous demineralisation spots on almost all tooth surfaces.

THERAPIES UNDERTAKEN PREVIOUSLY

Patient did not use any type of specific toothpaste, mouthwash, mousse for the treatment of demineralised lesions.

TREATMENT PLAN:

• PREPARATION

• THERAPY (DESCRIPTION AND NAME OF PRODUCTS USED, DURATION OF THERAPY, NUMBER OF APPLICATIONS)

• SIDE EFFECTS IF OBSERVED

- 3 appointments
- Time zero: motivation + periodontal chart + professional oral hygiene (POH) + photo + application BIOSMALTO® CARIES ABRASION & EROSION intensive action mousse (5 minutes), recommended purchase of BIOSMALTO® CARIES ABRASION & EROSION TOOTHPASTE AND CARIES ABRASION & EROSION INTENSIVE ACTION MOUSSE to be used twice a day for 2 weeks (for 5 minutes each time, no rinsing for the next hour)
- Check-up after 2 weeks: re-evaluation of motivation + check-up + photo + APPLICATION OF BIOSMALTO® CARIES ABRASION & HEROSION intensive action mousse, recommended to continue with BIOSMALTO® CARIES ABRASION & HEROSION toothpaste and mousse for a further 6 weeks
- Check-up after 2 months (pt with good compliance): motivation, re-evaluation + check-up + photo + application BIOSMALTO® ABRASION & EROSION CARIES MOUSSE, maintenance plan agreed.

THERAPY OUTCOME AND PROGRESS OBSERVED AT THE VARIOUS INTERVALS

- Time zero: presence of a number of demineralisation spots on almost all teeth surfaces (occlusal, vestibular of premolars and especially 2nd and 5th sextant, lingual and palatal)
- 2-week check: demineralisations improved by extension, number and chromatic value especially on the 2nd and 5th vestibular sextant
- 2-month check: almost no demineralisations on the 2nd and 5th vestibular sextant and premolar and molar occlusal zones, in terms of extension as well as chromatic value, improved but still present in the premolar and molar lingual/palatal and vestibular area.

AGREED MAINTENANCE PLAN: RECALL INTERVALS, MONITORING

- Agreed recall at 2 months (excellent compliance)
- Application of BIOSMALTO® INTENSIVE ACTION MOUSSE at each check session
- Recommended for home oral hygiene (HOH) of intensive action BIOSMALTO® toothpaste and mousse until the next recall.

HAVE ORAL HYGIENE TECHNIQUES BEEN MODIFIED?

- Electric toothbrush with soft bristles already used by the patient
- Motivated to use dental floss.



BEFORE



AFTER 2 WEEKS



AFTER 8 WEEKS

CLINICAL CASE

Dr. DANIELE MODESTI

PATIENT AGE

37 YEARS

REASON FOR VISIT

Patient comes to my attention for professional hygiene and possible whitening to improve the smile aesthetics. After careful analysis, it is explained to the patient that whitening can only camouflage the lesions but not remove them, and that another type of treatment will be necessary.

OBJECTIVE EXAMINATION AND DESCRIPTION OF THE CLINICAL SITUATION OBSERVED

After properly taking the medical history and careful clinical evaluation, we explain to the patient that her enamel defect is fluorosis, caused by excessive fluoride intake.

THERAPIES UNDERTAKEN PREVIOUSLY

The patient used whitening toothpastes but never tried, and was never offered the option to solve the problem.

TREATMENT PLAN:

• PREPARATION

• THERAPY (DESCRIPTION AND NAME OF PRODUCTS USED, DURATION OF THERAPY, NUMBER OF APPLICATIONS)

• SIDE EFFECTS IF OBSERVED

- Professional oral hygiene
- Taking impression and making individual heat-moulded trays
- Delivery and explanation on how to apply BIOSMALTO® CARIES ABRASION & EROSION MOUSSE
- In addition to the MOUSSE, we also asked the patient to use BIOSMALTO® CARIES ABRASION & EROSION TOOTHPASTE
- No side effect observed
- Improvement of the slight dentine sensitivity that the patient complained of from time to time.

THERAPY OUTCOME AND PROGRESS OBSERVED AT THE VARIOUS INTERVALS

We took a photo at the beginning of the therapy and after 30 days of using the mousse. The patient, who at first did not believe she had been excessively compliant, actually noticed that her clinical condition improved during treatment, and at the 30-day re-evaluation we observed a generalised reduction in defects and lesions of the enamel on all teeth, as well as a reduction in dentinal sensitivity that she had sometimes complained of.

AGREED MAINTENANCE PLAN: RECALL INTERVALS, MONITORING

We had the patient apply the mousse by means of individually heat-moulded trays twice a day after performing home oral hygiene procedures. Each application is 20 minutes long, after which the patient must not rinse, eat, drink or smoke. We reassess every 30 days for a minimum of 3 months.

HAVE ORAL HYGIENE TECHNIQUES BEEN MODIFIED?

The patient already had good plaque control at home, we only changed from a medium toothbrush to a Curasept SOFT 012 toothbrush, and eliminated the whitening toothpaste that the patient liked so much (but which caused tooth sensitivity and was characterised by high abrasiveness), replacing it with BIOSMALTO® CARIES ABRASION & EROSION toothpaste.



BEFORE



AFTER 30 DAYS



AFTER 70 DAYS

CLINICAL CASE

Dr. MATTEO BASSO

PATIENT AGE

19 YEARS

REASON FOR VISIT

The patient presents with numerous whitish stains on all teeth, which create discomfort due to the aesthetic appearance, as well as dentine hypersensitivity. Previously never treated with conservative or re-mineralising therapies. The (incorrect) diagnosis made previously was 'amelogenesis imperfecta'.

OBJECTIVE EXAMINATION AND DESCRIPTION OF THE CLINICAL SITUATION OBSERVED

On objective examination, a picture of generalised fluorosis of all teeth is observed. The surface is irregular in several places: there are areas of highly porous enamel and other areas where detachments of superficial portions of tooth tissue can already be observed.



THERAPIES UNDERTAKEN PREVIOUSLY

The patient had previously used fluoride toothpastes without any particular improvement of the lesions. Prior to the visit, she had never been advised to undertake re-mineralising treatments.

TREATMENT PLAN:

• PREPARATION

• THERAPY (DESCRIPTION AND NAME OF PRODUCTS USED, DURATION OF THERAPY, NUMBER OF APPLICATIONS)

• SIDE EFFECTS IF OBSERVED

- Given the irregularity of the tooth surfaces, it was decided to proceed with a controlled micro-abrasion procedure using specific products
- Two applications were sufficient to obtain an even surface without any particular irregularities
- Immediately afterwards, the patient received an application of BIOSMALTO® SENSITIVE TEETH MOUSSE with special trays for 5 minutes to prevent post-treatment sensitivity, and continued at home with BIOSMALTO® CARIES ABRASION & EROSION both MOUSSE and TOOTHPASTE, twice a day for 3 months.



THERAPY OUTCOME AND PROGRESS OBSERVED AT THE VARIOUS INTERVALS

After 3 months the progress was evaluated, observing an improvement in the opacity of teeth surfaces, and a marked reduction in white spots. THE PATIENT SAID SHE WAS ALREADY SATISFIED, BUT AS THE DENTIST BELIEVED THAT MORE PROGRESS COULD BE MADE, THE PATIENT CONTINUED THE THERAPY WITH BIOSMALTO® MOUSSE AND TOOTHPASTE for 3 more months.



At 6 months, progress was evident. Most of the whitish areas had disappeared and the surface was homogenous and glossy, with signs of clear remineralisation.



AGREED MAINTENANCE PLAN: RECALL INTERVALS, MONITORING

At 6 months it was decided to continue with a micro-abrasion treatment for the lower arch as well. The patient has by now integrated BIOSMALTO® MOUSSE AND TOOTHPASTE into her daily oral hygiene, and as her smile has significantly improved, she does not intend to discontinue them. Recall sessions are scheduled every three months, at least until the result has completely stabilised also for the lower arch.

HAVE ORAL HYGIENE TECHNIQUES BEEN MODIFIED?

For home oral hygiene, the medium-bristle toothbrush commonly used by the patient was replaced with a soft-bristle toothbrush from the BIOSMALTO® range, specifically designed for re-mineralising therapies. For interdental hygiene, an atraumatic interdental brush from the CURASEPT PROXY range with Safe Stop System was preferred over others to prevent trauma to the gums and impact against the interproximal tooth surfaces.

CLINICAL CASE	Dr. STEFANIA MORITTU
PATIENT AGE	17 YEARS
REASON FOR VISIT	Periodic check-up, visit for orthodontic braces.
OBJECTIVE EXAMINATION AND DESCRIPTION OF THE CLINICAL SITUATION OBSERVED	On objective examination, the patient presented with an excellent state of dental-parodontal health, only whitish lesions of uncertain origin were noted on the upper central incisors, with a clinical suspicion of lesions due to an excess of fluoride (the girl lives in a town where the water is very rich in salts, there are many cases of fluorosis in that area). Good home oral hygiene, no detectable carious lesions.
THERAPIES UNDERTAKEN PREVIOUSLY	This is the first time she has undertaken therapy for this problem.
TREATMENT PLAN: • PREPARATION • THERAPY (DESCRIPTION AND NAME OF PRODUCTS USED, DURATION OF THERAPY, NUMBER OF APPLICATIONS) • SIDE EFFECTS IF OBSERVED	• Initial visit • Tartar ablation • Home oral hygiene instructions: BIOSMALTO® CRIES ABRASION & EROSION toothpaste, 3 times a day, BIOSMALTO® CRIES ABRASION & EROSION Mousse to be used at night, after brushing teeth well. Put some mousse in the lesions and go to bed without rinsing (if the patient drinks during the night, the mousse will need to be reapplied again).
PERIOD OF USE	Every day for 3 months.
THERAPY OUTCOME AND PROGRESS OBSERVED AT THE VARIOUS INTERVALS	After 1 month, an improvement in the colour appearance of the lesion could be observed, accordingly it was decided to continue with the mousse for 2 more months.
AGREED MAINTENANCE PLAN: RECALL INTERVALS, MONITORING	Checks at 1 month after using the mousse, 2 months and 3 months. Thereafter, the patient will be checked every six months, using the mousse as needed.
HAVE ORAL HYGIENE TECHNIQUES BEEN MODIFIED?	Home oral hygiene techniques have not been modified. No side effects observed. At the monthly check-up the lesion appears less white, less conspicuous, the 'chalky' appearance has almost disappeared. The distal-incisal part of 22nd can hardly be seen.



CLINICAL CASE	Dr. ELISABETTA MOZZONI
PATIENT AGE	19 YEARS
REASON FOR VISIT	The patient started fixed orthodontic therapy in November 2013, which ended in October 2018. After removal of the fixed devices, the patient had white spots in the peripheral areas of the brackets.
OBJECTIVE EXAMINATION AND DESCRIPTION OF THE CLINICAL SITUATION OBSERVED	During orthodontic therapy, the patient was never able to have good control of bacterial plaque, despite being instructed several times and even introducing the electric toothbrush into his home hygiene routine. The consequence of the continued presence of bacterial plaque was the formation of numerous white spots in the areas surrounding the brackets.
THERAPIES UNDERTAKEN PREVIOUSLY	The patient used a toothpaste containing Sodium Monofluorophosphate (1,450 ppm) and 1.5% Arginine during treatment.
TREATMENT PLAN: • PREPARATION • THERAPY (DESCRIPTION AND NAME OF PRODUCTS USED, DURATION OF THERAPY, NUMBER OF APPLICATIONS) • SIDE EFFECTS IF OBSERVED	• Professional oral hygiene • As the patient had the specific heat-moulded containing trays, we explained how to apply BIOSMALTO® CRIES, ABRASION & EROSION MOUSSE (one application per day of 40 minutes after which the patient was not to drink or eat for about 30 minutes) • During the period of use of BIOSMALTO® MOUSSE, the BIOSMALTO® CRIES, ABRASION & EROSION toothpaste was also prescribed • No side effects were reported by the patient.
THERAPY OUTCOME AND PROGRESS OBSERVED AT THE VARIOUS INTERVALS	The initial photo was taken the day the orthodontic appliance was removed. The re-evaluation photo was taken after 8 months of treatment with BIOSMALTO® CRIES, ABRASION & EROSION MOUSSE and TOOTHPASTE. At the time of the re-evaluation an evident improvement in enamel lesions was observed. Even the patient, who had also improved their compliance in oral hygiene at home in the meantime, noted and appreciated the improvement.
AGREED MAINTENANCE PLAN: RECALL INTERVALS, MONITORING	We saw the patient again after 1 year, who still continues using the mousse for one-month cycles immediately after the professional oral hygiene sessions, and then continues using BIOSMALTO® CRIES ABRASION & EROSION toothpaste and MOUTHWASH until the next check-up, scheduled every 4 months.
HAVE ORAL HYGIENE TECHNIQUES BEEN MODIFIED?	The patient was instructed to use the electric toothbrush and motivated to floss. A marked improvement in hygiene is essential for the successful outcome of any remineralisation therapy.



BIBLIOGRAPHY

1. Iafisco M, Degli Esposti L, Ramírez-Rodríguez GB, Carella F, Gómez-Morales J, Ionescu AC, Brambilla E, Tampieri A, Delgado-López JM. Fluoride-doped amorphous calcium phosphate nanoparticles as a promising biomimetic material for dental remineralization. *Scientific Reports*, 8:17016. DOI:10.1038/s41598-018-35258-x. www.nature.com/scientificreports. 2018.
2. Marchesi D, Rodighiero S, Benedetti L, Francolini M, Costa I, Morelli L. Morphological and chemical characterisation of teeth undergoing treatment with mineralising toothpaste. *Laboratory of Cellular and Molecular Imaging*, Fondazione Filarete, Milan. Italy. Report 134/2015.
3. Basso M, Ionescu AC, Brambilla E, Tassera C. Biomimetic Hydroxyapatite-based Toothpaste on Bacterial Colonization of Enamel and Composite. *International Association for Dental Research*, ID: 2530660, #0195. Jerusalem (Israel). 2016.
4. Basso M, Weinstein T, Tassera C, Ionescu AC, Giovannardi M, Weinstein RL. 3-day clinical study on three different toothpastes on dentine hypersensitivity. *International Association for Dental Research*, ID: 2530694, #0200. Jerusalem (Israel). 2016.
5. Ionescu A, Cazzaniga G, Ottobelli M, Brambilla E. Substituted nano-hydroxyapatite toothpastes affect biofilms on enamel and composite. *Institute of Medical Microbiology, University of Milan*. Data on file 2018. Submitted for publication. 2019.
6. Brambilla E, Ionescu AC. Microscopical evaluation of a tooth surface exposed to a hydroxyapatite with Mg-Sr-CO₃ substitution with chitosan and Fluor-hydroxyapatite. Data on file. 2016.
7. Pulcini MG, Gone Benites JM, Scagnelli A, Bevilacqua A, Dian A. Treatment and prevention of teeth sensitivity following third molar extraction. A biomimetic approach. *University of Milan. Academic Board, Naples. Journal of Osseointegration* 11(2): 181. 2019.
8. Ionescu AC, Izzo D, Pulcini MG, Dian A, Brambilla E. Biomimetic toothpastes and mousses for enamel remineralization. *University of Milan. Academic Board, Naples. Journal of Osseointegration* 11(2): 267. 2019.
9. Degli Esposti L, Tampieri A, Iafisco M. Comparative evaluation of fluorine incorporation into dental tissues between 2 remineralizing topical dental mousses, based on amorphous calcium phosphate (ACP). An in-vitro study. *CNR-ISTEC Faenza*, data on file. 2019.
10. Ionescu A, Brambilla E. Evaluation of fluoride release from a toothpaste containing substituted nanoapatite. *University of Milan, Laboratory of Oral Microbiology and Biomaterials*. Data on File. 2019.
11. Marchisio O, Matera C, Butera A, Lanteri V. Prophylaxis and risk of bracket detachment during orthodontic therapy: comparison between different methods. Poster 3081, *IADR General Session Congress*, London, 2018.
12. Degli Esposti L, Iafisco M. Chemical-physical characterisation of "Curasept Biosmalto Cavities Abrasion & Erosion" toothpaste and in vitro evaluation of its remineralising activity and occlusion of the dentine tubules. *National Research Council (CNR), Institute of Science and Technology of Ceramic Materials*. Date on file, July 2019.
13. Butera A, Matera C, Chiesa A, Scribante A, Cossellu G, Maciocco GR, Lanteri V. The effect of six different preventive treatments on the shear bond strengths of orthodontic brackets: an in vitro study. *International Journal of Clinical Dentistry*: 209-217, Volume 12, Issue 3. 2019.
14. Sanavia C, Tatullo M, Bassignani J, Cotellessa S, Fantozzi G, Acito G, Iommiello A, Chiavistelli L, Sabatini S, Nardi GM. Remineralization Strategies in Oral Hygiene: A Position Paper of Italian Society of Oral Hygiene Sciences-S.I.S.I.O. Working Group. *The Open Dentistry Journal*, 11, 527-538. 2017.
15. Landi E, Logroscino G, Proietti P, Tampieri A, Sandri M, Sprio S. Biomimetic Mg-substituted hydroxyapatite: from synthesis to in vivo behavior. *J Mater Sci: Mater Med*, 19:239-247. 2008.
16. Landi E, Sprio S, Sandri M, Celotti G, Tampieri A. Development of Sr and CO₃ co-substituted hydroxyapatites for biomedical applications. *Acta Biomaterialia* 4, 656-663. 2008.
17. Yin Y, Yun S, Fang J, Chen H. Chemical regeneration of human tooth enamel under near-physiological conditions. *Chemical Communications*, 5892-5894. 2009.
18. Naveena PP, Nagarathana C, Sakunthala BK. Remineralizing Agent -Then and Now -An Update. *Dentistry*, 4: 9. <http://dx.doi.org/10.4172/2157-7633.1000256>. 2014.
19. Jayasudha B, Navin HK, Prasanna KB. Enamel Regeneration - Current Progress and Challenges. *Journal of Clinical and Diagnostic Research*. Vol-8(9): ZE06-ZE09. 2014.
20. Philip N. State of the Art Enamel Remineralization Systems: The Next Frontier in Caries Management. *Caries Research*. 53:284-295. 2019.

