



BRIX 3000[®]

NEW ENZYMATIC TECHNOLOGY FOR THE
NON-TRAUMATIC CARRIES REMOVAL.

Minimal invasion. Maximum tissue preservation

The ART (Atraumatic Restorative Treatment) technique, supported by WHO (World Health Organization) and the IDF (World Dental Federation), has been a valid option for the treatment of caries with the same effectiveness as the traditional technique for several decades.

This atraumatic technique, which has an increasing acceptance level by both patients and professionals owing to the fact that there is a reduction in the administration of anesthesia and the use of the drill, has the purpose of preserving the most of the dental tissue which has been affected by the caries but which has regenerative and remineralization capacity.

Because of this, according to the most current international caries consensus, it is advisable to detect and remove only the infected dentin and preserve the affected one.

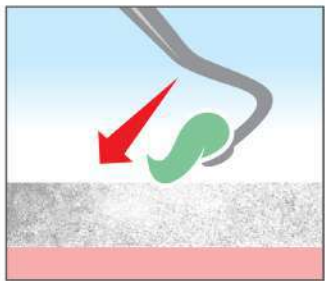
Brix3000® makes the removal of the infected dentin easier and is a complement to this technique which is being used more and more by dentists all over the world. The infected tissue is softened as the proteolysis of collagen fibres is produced two(2) minutes after Brix3000® application in the cavity. Moreover, there is softening of the fibrin layer when being in contact with it.

The atraumatic enzymatic removal of the caries with Brix3000® is a simple, safe, quick and painless procedure for the patient who, depending on their condition or place of residence, can be treated anywhere without the need of a dental office infrastructure (community dentistry, home dentistry, etc).

BRIX3000® sets the limit.

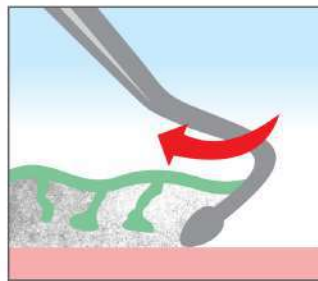
Which is the limit for caries removal?

Brix3000® is an enzymatic gel which is safe and effective. Due to its exclusive and unique characteristics, the dentist will be able to differentiate clearly the between the infected and affected dentin.



Brix3000® is applied inside the cavity leaving it for two minutes.

The proteolysis on the INFECTED dentine collagen fibres is produced which softens the tissue for later removal.

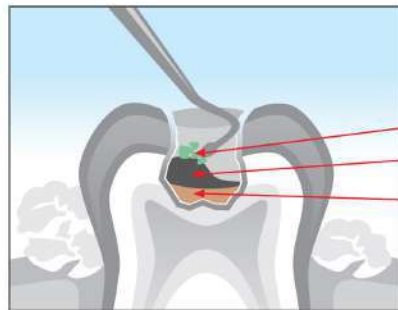


After 2 minutes, the infected dentin is removed with pendulum movements without making pressure on it.

The affected dentin is preserved as it has regenerative and re-mineralization capacity.

Why does this happen?

Because Brix3000® will only produce the proteolysis on the devitalized dentin (infected dentin, denaturalized tissue) making it softer for its subsequent easy removal with pendulum movements without pressure.



Brix3000® enzymatic gel
Infected dentin (Necrotic)
Affected dentin (Vital)

Selectivity

Physiological

When Brix3000® gets in contact with the affected dentin or pulp tissue, it loses its enzymatic capacity because of the presence of $\alpha 1$ -antipristine, the antiprotease which is present in any tissue in any living organism. Due to this, Brix3000® is safe for all patients as if it is ingested, gets in contact with pulp tissue, gums, tongue; or is accidentally dropped on a patient's eye, there will be no consequences or reactions.

Microphysics

Due to the fact that this product cannot work on the healthy collagen fibres of the tissues which have not been affected by caries.



INNOVATION
SAFETY
EFFICACY

E.B.E. Technology® (Encapsulating Buffer Emulsion)

The papain, Brix3000® main component, is bio-encapsulated by using the innovative and exclusive E.B.E. Technology® (Encapsulating Buffer Emulsion), which immobilizes the gel and confers its stability increasing the enzymatic activity of the product exponentially when being compared to the current technique.

This and other characteristics, added to the fact that its concentration is 3000 U/mg, make Brix3000® a unique and innovative medical product in the world, created and patented worldwide by Brix SRL Aregentina and Brix USA LLC.

E.B.E. Technology® provides the gel with the optimum pH to immobilize the enzyme and free it at the moment of exerting proteolysis in collagen, increasing its enzyme activity by a 50% to 60%.

Therefore, the following is achieved: high proteolytic effectiveness on the necrotic tissue to remove the collagen fibres in the carious tissue, lower dissolution of the active principle by oral fluids, greater resistance to storage even in unfavorable conditions without requiring cold-chain preservation, and greater antibacterial and antifungal potency with a greater and powerful antiseptic effect on tissue.

Additionally, Brix3000® is an innocuous gel, 100% devoid of toxicity, which means it does not cause any type of reactions when it comes into contact with healthy tissue: tongue, gums, healthy dentin, skin-not even when ingested.

Brix3000® does not cause irritation or sensibility due to the selective action of the gel, i.e., it only acts on necrotic tissue and loses its enzymatic capacity when it comes into contact with healthy tissue.

During a long period of research, we studied the behavior of Brix3000® in 2,163 patients whose ages ranged from 6 to 17 and from 35 to 70 with diverse types of caries and evolution of the infectious process.

After this study and the monitoring of the patients treated for a period of time, we can state that 89% of them stated they had not suffered any pain during treatment and, when the dental pieces were exposed to the caries detector, none of them showed a positive result, i.e., caries had been removed completely.

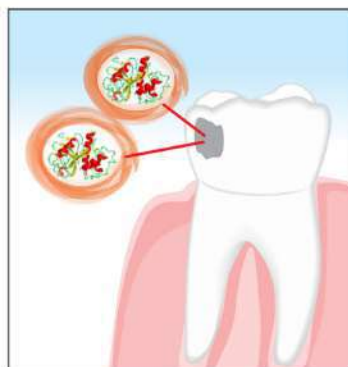
E.B.E. Technology®
(Encapsulating Buffer Emulsion)
provides Brix3000®
gel with the optimum pH
to immobilize the enzyme and
free it at the moment of exerting
proteolysis in collagen
by just getting in contact
with the infected tissue.



BIO-ENCAPSULATION

E.B.E. Technology® frees the enzyme when Brix3000® gets in contact with the caries and the proteolysis is generated.

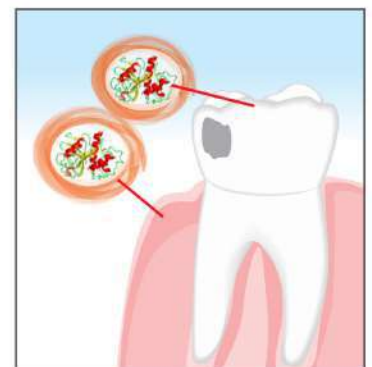
With this exclusive E.B.E. Technology®, the enzyme is immobilized and it confers stability by increasing the enzymatic activity of the product exponentially providing greater effectiveness.



PROTEOLYSIS

E.B.E. Technology® frees the enzyme when Brix3000® gets in contact with the caries and the proteolysis is generated.

This softens the necrotic tissue caused by the caries making the removal with a blunt spoon easier and without pressure.



SELECTIVITY

When the gel gets in contact with the dentin or healthy tissues, it loses its enzymatic capacity as they have the antiprotease α 1-antitrypsin, which inactivates the enzymatic action of Brix3000®.

BRIX3000® Is the new enzymatic technology for the atraumatic caries removal.

Brix3000® is a dental medical product specially designed for the atraumatic caries removal, i.e. without the use of anesthesia and reducing the use of the turbine.

This is an innocuous water-based product which is totally safe for any kind of patient as it does not contain toxic or irritating components. Brix3000® has been tested on the soft tissues of the oral cavity and mucosa not showing any signs of irritation on these parts.

Brix3000® is an enzymatic gel with a selective basis, i.e. it does only work on the infected tissue caused by the caries preserving the tissue which has regenerative and re-mineralization capacity.

 To see research on irritation stages and eye mucous membrane go to www.brix-lab.com, BRIX3000 SCIENTIFIC PUBLICATIONS (SCIENTIFIC PAPERS)

Brix3000® does not require to be kept under cooling conditions as the papain enzyme, which is the main component of the gel, is protected by the exclusive E.B.E. Technology (Encapsulating Buffer Emulsion).

Brix3000® is a medical product authorized by ANMAT (Argentine Administration of Drugs, Food and Medical Devices) and by health agencies in several countries. Its patent is registered in Argentina and worldwide by Brix SRL Argentina and Brix USA LLC.

Instructions for application

Previous preparation: if necessary, enlarge the diameter of the cavity with manual or rotary instruments if available to get an expulsive cavity. In case of large lesions, apply directly.



Relative isolation of target tooth with cotton balls.



Apply Brix3000® with a blunt spoon allowing the product to work for 2 minutes.



Remove the material with a blunt spoon with pendulum movement and without pressure.

-If necessary, repeat the procedure to get to healthy dentin.
-Confirm the presence of healthy dentin with caries explorer and detector.



If necessary, restore the pulp. Apply obturating material immediately.





CARIES REMOVAL	BRIX3000®	Conventional Technique
Mechanism	Enzymatic	Rotary
Anesthesia use	No	Yes
Rotary instrument use (Turbine)	No	Yes
Isolation	Relative	Sometimes complete
Operatory technique	Atraumatic	Traumatic
Procedure	Minimally invasive	Invasive
Empathy between professional and patient	Higher	Lower
Brad practice risk	Minimal	High
Fear to the dentist	Unlikely	Likely
Operatory technique	Simple	Complex
Sanitary infrastructure requirements for treatment	No	Yes
Pulp exposure risk	Lower risk	Higher risk
Post trauma cavity for adhesive material	Rough and retentive	Smooth and expulsive
Micro-cracks and micro-fractures	No	Likely
Operative time	7 ½ - 15 min.	20 - 40 min.
Patient's comfort	Higher	Lower
Patient's reaction to pain	Lower	Higher

Clinical Cases



These cases have been treated without anesthesia or rotary instruments. Post treatment caries detector has been used. (Dr Fernando Varea Torresi. License number 4508/02.)

BIOAEROSOLS



BIOSAFETY



BRIX3000®

THE NEW ENZYMATIC TECHNOLOGY FOR ATRAUMATIC
CARIES REMOVAL.





BRIX MEDICAL SCIENCE

We are a young laboratory specialized in the pharmaceutical industry, founded in 2010 and emerging from the initiative and research of a group of Argentinean professionals and scientists for the scientific development of innovative medical specialties and products which are devoted to the treatment of necrotic tissue in the fields of dentistry, ophthalmology, traumatology, dermatology, and cardiovascular and plastic surgery.

Based in the Industrial Area in Carcarañá, Santa Fé Province, Argentina, we develop and manufacture our pharmaceutical products in compliance with international quality standards and norms, and with state-of-the-art equipment and technology; always working with the philosophy of continuous improvement, bearing in mind the needs of professionals and their patients.

Our products reach the hands of professionals all over the country and abroad through a network of strictly selected distributors, aiming at improving the health and quality of life of millions of people regardless of social class and place of residence.



BRIX MEDICAL SCIENCE

BRIX SRL ARGENTINA

Ruta 9 Km. 348,5 . Área Industrial Carcarañá
2138 Carcarañá . Santa Fe . Argentina
T. 54 341 4943094 . info@brix-lab.com

BRIX USA, LLC

2721 Executive Park Drive
Suite 4. Weston FL 33331
United States of America

www.brix-lab.com

