ACTIVABONE®

NEXT REGENERATION TECHNOLOGY

New generation visco-modulated bone pastes

dental surgery

The new generation of bone pastes

Packed with technology

The line of **Activabone®** *bone pastes stems from a unique technological combination. The equine origin bone substitutes obtained through the exclusive* **Zymo-Teck®** *enzymatic process are now associated to* **Exur®**, *the innovative polymer carrier with modulated viscosity developed by Bioteck R&D.*

Bone pastes represent a valid alternative to conventional bone grafts, however the carriers often feature rheological properties that are unsuited to assuring good handling or withstanding leaching during grafting in a bloody environment. However, the **Activabone®** line features an extraordinary balance of rheological and biological properties.

Zymo-Teck®
PROCESS

The use of enzymes, without using potentially harmful chemicals, results in perfect cleaning of the bone tissue while retaining its physical and morphological features, also preserving the extracellular bone matrix in its native conformation.

Mineralized bone

Demineralized bone matrix (DBM)

Exur®

The innovative carrier combines synthetic polymers with ancillary quantities of ascorbic acid having a visco-modulating function to obtain bone substitutes having controlled biological properties, texture, malleability and adhesiveness, so as to perfectly adapt to the geometry of bone defects of any size or shape.

Polymer hydrogel

Vitamin C

Bone paste comparison

	I generation	ACTIVABONE
HANDLING AND MOULDABILITY	●●○○○	●●●●●
HOMOGENEOUS MIXTURE	●○○○○	●●●●●
WITHSTAND LEACHING IN A BLOODY ENVIRONMENT	●○○○○	●●●●○
OSTEOPROMOTIONAL EFFECT	●●○○○	●●●●●

	DBM Gel	CLX Gel	Injectable	Mouldable	CS Mix	Putty
OSTEOPROMOTION	●●●○	●○○○	●●●●	●●●●	●○○○	●○○○
OSTEOCONDUCTION	●○○○	●●○○	●●○○	●●●○	●●●○	●●●○
WITHSTAND LEACHING	●○○○	●○○○	●●○○	●●●○	●●○○	●●●○
DENSITY	●○○○	●○○○	●●○○	●●●○	●●●○	●●●○
INJECTABLE	●●●●	●●●●	●●●●	●○○○	●○○○	○○○○
MOULDABLE	○○○○	●○○○	●○○○	●●●●	●●○○	●○○○

- Physiological osteoclastic adhesiveness: natural remodeling
- Presence of collagen in native conformation: greater formation of new bone tissue
- Optimal osteoconduction

- Obtained through a demineralization process of cortical bone extracellular matrix
- Contains all the elements naturally found in bone matrix and makes them immediately available to the body
- Regeneration-promoting effect known in the literature since the 1970s

- Optimal graft hydration
- Provides the ideal environment for cellular proliferation

- Limits or prevents intra- and intermolecular reorganization of polymer chains
- Modulates viscosity providing superior rheological properties

ACTIVABONE® DBM GEL

Composition: Demineralized bone matrix (DBM), Exur® (low molecular weight carrier - LMW, Vitamin C).
Applications: liquid osteopromoter, it may be mixed with granular grafts or spread on the surface of block grafts.
Advantages: liquid form, combines the osteopromoting effect of DBM with that of the carrier.

ACT-GEL005	**Activabone DBM gel**	**1 syringe**	**0.5 cc**

ACTIVABONE® CLX GEL

Composition: Bone powder, type I collagen, Exur® (low molecular weight carrier - LMW, Vitamin C).
Applications: to replace a membrane for protecting bone defects in small periodontal defects (short protection time), as bone graft in minimal containing defects.
Advantages: mild osteoconductive effect (bone powder), osteopromoting effect given by the 3D carrier structure, high fluidity (easy to extrude), does not require hydration (shorter surgery time), total remodeling.

ACT-CLX010	**Activabone CLX gel**	**1 syringe**	**1.0 cc**

ACTIVABONE® INJECTABLE PASTE

Composition: Demineralized bone matrix (DBM), bone powder, type I collagen, Exur® (low molecular weight carrier - LMW, Vitamin C).
Applications: osteopromoter in injectable paste also usable as bone graft in sinus lift through crestal approach and in small containing defects.
Advantages: moderate osteoconductive effect (bone powder, DBM), it combines the osteopromoting effect given by the DBM to that of the carrier, high fluidity (easy to extrude), does not require hydration (shorter surgery time), total remodeling.

ACT-INJ005	**Activabone DBM injectable paste**	**1 syringe**	**0.5 cc**
ACT-INJ010	**Activabone DBM injectable paste**	**1 syringe**	**1.0 cc**

ACTIVABONE® MOULDABLE PASTE

Composition: Demineralized bone matrix (DBM), bone powder, cortical and cancellous granules Ø 0.5-1 mm, type I collagen, Exur® (low molecular weight carrier - LMW, Vitamin C).
Applications: all bone regeneration procedures.
Advantages: good osteoconductive effect (bone granules, bone powder, DBM), it combines the osteopromoting effect given by the DBM to that of the carrier and preserved bone collagen, excellent handling (moldable), does not require hydration (shorter surgery time), total remodeling.

ACT-MLD005	**Activabone DBM mouldable paste**	**1 syringe**	**0.5 cc**
ACT-MLD010	**Activabone DBM mouldable paste**	**1 syringe**	**1.0 cc**

ACTIVABONE® CS MIX

Composition: Bone powder, cortical and cancellous granules Ø 0.5-1 mm, Exur® (low molecular weight carrier - LMW, Vitamin C).
Applications: all bone regeneration procedures.
Advantages: excellent osteoconductive effect (bone granules, bone powder), osteopromoting effect given by the 3D carrier structure and by the preserved bone collagen, does not require hydration (shorter surgery time), total remodeling.

ACT-CMX025	**Activabone Mix granules in syringe**	**1 syringe**	**0.25 cc**
ACT-CMX050	**Activabone Mix granules in syringe**	**1 syringe**	**0.5 cc**

ACTIVABONE® PUTTY

Composition: Bone powder, cancellous granules Ø 0.5-1 mm, type I collagen, Exur® (low molecular weight carrier - LMW, Vitamin C).
Applications: bone graft in containing defects (Post-extractive socket, cavities left by bone cysts).
Advantages: excellent osteoconductive effect (bone granules, bone powder), osteopromoting effect given by the 3D carrier structure and by the preserved bone collagen, can be used dry or after hydration. When hydrated it becomes moldable. Total remodeling.

ACT-PTY005	**Activabone putty**	**1 piece**	**0.5 cc**
ACT-PTY010	**Activabone putty**	**1 piece**	**1.0 cc**

ACTIVABONE®

NEXT REGENERATION TECHNOLOGY

The new generation of bone pastes

The bone substitutes in the **Activabone®** line act as collagenated osteoconductives and bone promoters with total osteoclastic remodeling, mixed with polymer carrier with modulated visco-elasticity and used as grafts in bone regeneration procedures.

Surgical Advantages

Leaching withstand ability and easier handling *- Bone pastes based on first generation carriers (standard), often feature rheological properties unsuited to assure good handling or to withstand leaching during grafting in a bloody environment.*

Perfect adaptability*: a graft for any defect. By suitably modifying the dose of Vitamin C (visco-modulating), it is possible to obtain extremely versatile and functional bone substitutes, having specific biological properties, texture, malleability and adhesiveness, such as to adapt perfectly to the specific geometry of the bone defects of any dimension or shape.*

Optimal dissolution

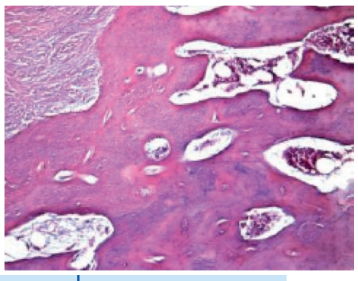
Persists at the grafting site for the time required for tissue regeneration to occur.

Enhanced osteopromotion

Thanks to the optimal proliferation of cells within the three-dimensional structure of the polymeric carrier and, in some formats, strongly implemented by the presence of DBM.

Perfect adaptability

The wide range of available visco-elasticity makes it easy to find the right product for any type of defect.



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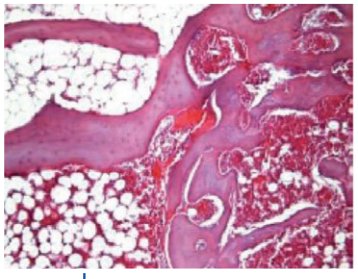

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Clinical Advantages

Optimal regeneration *- The total remodeling biomaterial is combined with a polymer carrier that further enhances its regenerative power: while maintaining stability and spaces, it actively stimulates the formation of new bone tissue.*

1 - *Formation of immature (fibrous) bone tissue due to use of quickly dissolving bone pastes.*

2 - *Perfectly regenerated bone tissue thanks to the use of* **Activabone®** *pastes. Notice the presence of the already perfectly developed marrow component.*

BIOTECK®

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Bioteck® is an Italian company producing bone substitutes and protective membranes that are successfully used in orthopaedics, neurosurgery, oral and maxillofacial surgery. Founded in 1995, the company continues to grow constantly and now operates in more than 50 countries around the world. A firm commitment to scientific research forms the basis for the innovative solutions offered by **Bioteck®** products. The company collaborates on numerous national and international research projects, which have driven the basic research and helped in writing important chapters in bone biology. The in-depth knowledge acquired by **Bioteck®** through its research ensures the absolute quality of its products, which are subjected to strict environmental and quality controls, thereby guaranteeing a product meeting the highest quality and safety standards.
Bioteck® applies a policy of total transparency, opening up the doors of its Production and R&D Center for the monitoring of its innovative process and the intense scientific research carried out by its staff.

ISO 9001

ISO 13485

bioteck.com

BIOTECK® Academy

In over twenty years of scientific research and clinical practice, **Bioteck®** has made an important contribution to the clinical/scientific knowledge in the field of tissue biology.
The **Bioteck Academy** is the meeting place of all the excellences that continuously contribute to the development of this knowledge and **Bioteck®** products.
The Academy has developed a culture of sharing scientific knowledge aimed at the **dissemination of best techniques and practices in the various areas of regenerative surgery** and is open to all professionals who decide to participate in this activity by sharing their surgical experience.
More information on the activities of the Academy can be found at: **www.bioteckacademy.com**.

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