Bioresorbable bone replacement from microporous and macroporous α-tricalcium phosphate.

BioBASE® AP

BioBASE AP is a synthetically manufactured granulate, consisting of phase-free α-tricalcium phosphate. BioBASE AP has been subjected to clinical trials for a vast range of indications during the last 20 years.

BioBASE AP meets requirements of „ASTM F 1088-04"– „TCP for Surgical Implantation."

The market does not offer much pure α-tricalcium phosphate. BioBASE AP is a purely inorganic α-tricalcium phosphate without proportions of non-resorbable hydroxyl apatite.

BioBASE AP possesses a very satisfying bioactivity. BioBASE AP has a system of micropores (< 5 µm) and macropores (max. 1 mm) with a porosity of approx. 65 %. This creates a far larger material surface, which enhances the reaction kinetics in the resorption

INDICATIONS

- Filling of defects following exstirpation of bone cysts
- Filling of extraction defects for the creation of an implant bed
- Filling of defects in the case of corrective osteotomy
- Other multi-layer bone defects of the alveolar processes and the facial skull
- Periodontal defects, also in connection with membranes
- Defects following the extraction of impacted teeth
- Defects following apicoectomy
- Sinus floor elevation
- Filling of gaps between the alveolar cavity and the implant

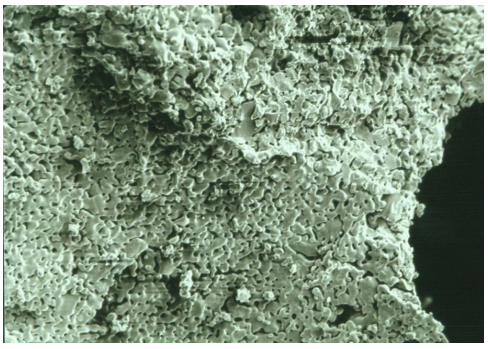

Figure 1: The microporosity is visible in this enlargement.

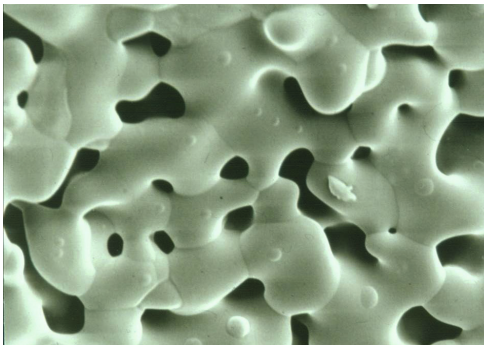

Figure 2: Microporosity in detail, pores up to approx. 5 µm; sinter necks are discernible.

APPLICATION

It is advisable to apply BioBASE AP in a moist state. The patient's own blood or blood plasma should be used. If neither option is available in sufficient quantities, a sterile isotonic saline solution may be used.

Where defects are larger than approx. 2 cm^3 it is advisable to mix BioBASE AP with spongiosa.

DEGRADABILITY

The results of hard tissue implantations of BioBASE AP exhibit a tissue-free accumulation of bone at BioBASE AP. A compound osteogenesis with extensive direct bone growth is formed between the implant and the newly formed bone at the implant site. Parallel to this process, the bioresorption of the material begins. The degra dation of BioBASE AP is accomplished as a result of the physicochemical solu bility and due to direct cellular attack.

The substance defects forming at the implant site will be replaced successively by the own vital bone of the patient. The resorption time is dependent on the size of the defect to be treated and on the intensity of the metabolic pro cesses at the implantation site and takes between 9 months and 2 years. An implant can be placed in the bone filled with BioBASE AP after approximately 6 months.

BioBASE AP is a transient bone replace ment granulate, and when used, resorp tion and new bone formation take place parallel. In contrast to this, granulates that are produced on the basis of hydroxylapatite (synthetically produced or manufactured on the basis of bovine bone) are sparsely or non resorbable and consequently remain as

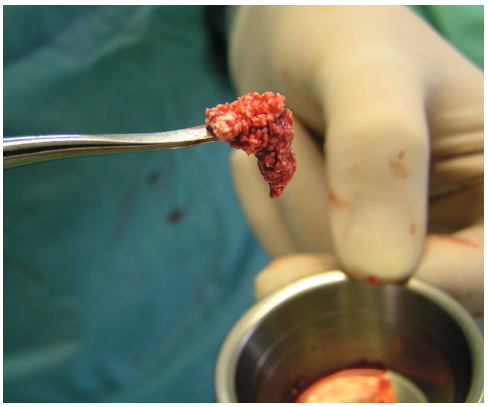

Figure 3: BioBASE AP mixed with autologous blood.

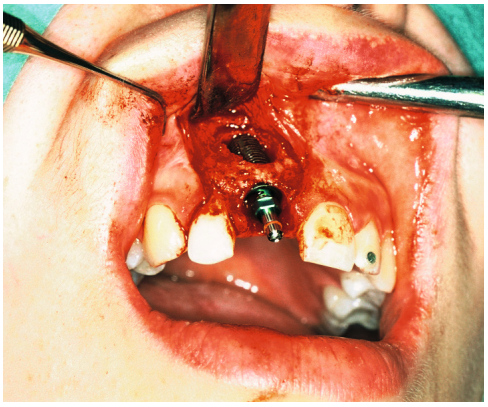

Figure 4: Apical defect in the maxilla.

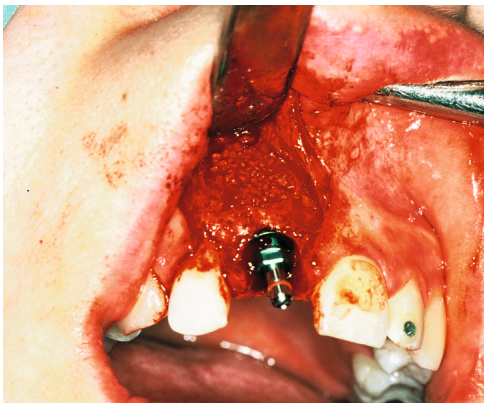

Figure 5: Defect filled with BioBASE AP.

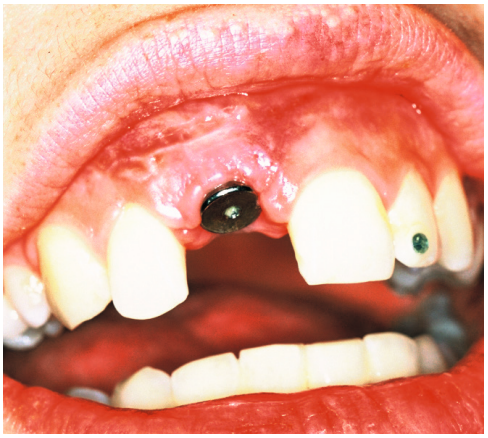

Figure 6: After the healing of the defect.

SAFETY

BioBASE AP exhibits an very good tissue compatibility with the organism of the recipient.

In comparison to bioglasses, BioBASE AP contains only chemical ingredients which are contained in human tissue or in the tissue fluid. These ingredients are either used by the body for the building up of tissue or excreted, meaning that no extraneous matter remains in the body. In contact with aqueous media (e. g. tissue fluid), BioBASE AP has a pH value within the physiological pH range of 7.4.

The α-form has been specifically selected for BioBASE AP (sintered at high temperature), as this is degraded ionically / hydrolytically due to the compact sinter grain. Due to the crystalline structure of α-TCP, connected at the contact points by so-called contact necks, a compact sinter grain, which is extremely stable against particular degradation and can therefore not be washed away in small particles, forms the defect site or is even excreted via the lymphatic system.

DURABILITY

BioBASE AP is available in 1 ml and 10 ml vials. BioBASE AP is sterile and free of pyrogens and, as long as the packaging remains intact, has a shelf life of 5 years at room temperature.

Information for ordering:

BioBASE AP	1 x 1,0 ml	0.2 – 0.5 mm	KE 0021
BioBASE AP	3 x 1,0 ml	0.2 – 0.5 mm	KE 0022
BioBASE AP	1 x 1,0 ml	0.5 – 1.4 mm	KE 0025
BioBASE AP	3 x 1,0 ml	0.5 – 1.4 mm	KE 0026
BioBASE AP	1 x 1,0 ml	1.4 – 3.2 mm	KE 0028
BioBASE AP	3 x 1,0 ml	1.4 – 3.2 mm	KE 0029

Order Hotline: T: +49 3677 64 07 10 | F: +49 3677 64 07 13 | info@biovision.de
Ordering: www.biovision.de/en/order

BIOVISION specialises in the development and manufacturing of biomaterials. In particular in the processing of resorbable polymer products by means of injection moulding and the production of resorbable ceramic products. These technologies are used inter alia in our products for dental surgery/implantology and for orthopedics. The following products are also included in our portfolio:

Orthopedics:

BetaBASE bioresorbable bone replacement

BioBASE bioresorbable bone replacement

PolyPIN bioresorbable bone pin

Wound Care:

EpiGARD synthetic skin replacement

Dental Surgery:

BetaBASE MP bioresorbable bone replacement

BioBASE AP bioresorbable bone replacement

LeadFIX bioresorbable membrane pin

PRODUCTION

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