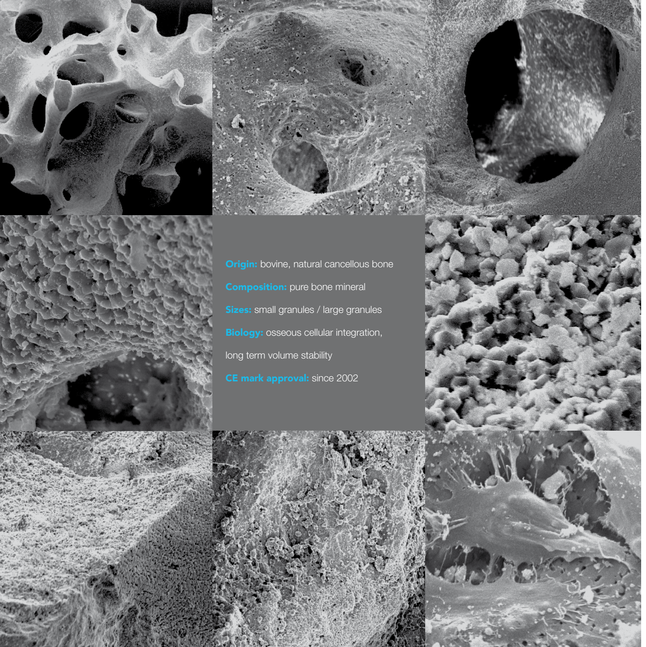

Origin: bovine, natural cancellous bone

Composition: pure bone mineral

Sizes: small granules / large granules

Biology: osseous cellular integration, long term volume stability

CE mark approval: since 2002

bone & tissue regeneration

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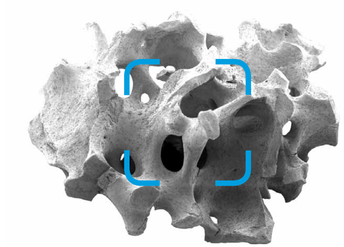
INSIDE



cerabone®

cerabone®

The natural bovine bone graft

cerabone®

The natural bovine bone graft

> 100 **scientific & clinical reports** (available on request)

Purity & safety

The unique patented production process of cerabone® includes several high temperature treatments. This reliably removes all organic components including potential bacteria, viruses and prions[1]. Heating creates a crystalline and pure biologic bone apatite free from organic components[2]. Nonetheless, the natural porosity and surface structure of the bone mineral are not affected.

100% biologic bone apatite

maximum reliability

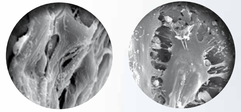
Interconnected pores & hydrophilicity

cerabone® is a highly porous bone graft of ~65-80% porosity with a mean pore size distribution of ~600-900 µm. Macro pores allow fast ingrowth of blood vessels and bone-forming cells while micro pores promote quick blood uptake by the capillary effect[3]. After rehydration, the sticky particles can be easily applied into the bone defect.

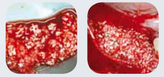
space for new bone matrix

Surface roughness & osteoconductivity

The inherent natural rough surface is preserved following the unique manufacturing process. By this means, cerabone® provides an appropriate scaffold for adherence and migration of osteogenic and blood vessel-forming cells.



cell adhesion & migration



Mixing of cerabone® with autologous bone chips

Application of cerabone® mixed with allogenic bone chips

90 Used in more than countries

> 15 years scientific & clinical experience

small granules **large granules**

What is crystallinity?

Crystals are characterized by a highly ordered arrangement of its components on a molecular basis. Changes in the crystallinity alters the resorption behavior of a bone grafting material[4], but does not affect the sharpness of the granules.

Bio-physical characteristics

What is heating?

In general, heating describes high temperature treatment of a certain material. For cerabone®, a patented production procedure was developed to preserve the natural porosity during heating while making it 100% safe.

Asst. Prof. Stavros Pelekanos (Greece):
I am using cerabone® the last couple of years with excellent results. The main indications in my daily practice are horizontal and vertical bone defects during or before implant placement using resorbable (e.g. Jason® membrane) or non-resorbable membranes for GBR procedures. The volume stability and the clinical results are remarkable and I would always recommend it for such applications.

Histology six months after sinus lift with cerabone®: Integration of the granules and formation of new bone on the surface

permanent structural support

Osseous integration & volume stability

High temperature treatment of bovine bone increases its crystallinity[4,2], which makes cerabone® resistant to fast resorption allowing for long-term volume stability.

Find the webinar of Dr. Steigmann about cerabone® and related webinars on **www.botiss-webinars.com**

Dr. Marius Steigmann (Germany):
I am one of the first users of cerabone®. In my daily practice I use it to treat dehiscences, to regenerate atrophic ridges and to support the soft tissue in the aesthetic zone by contouring the underlying bone. I appreciate its excellent handling properties and its exceptional long-term volume stability.
With cerabone® I know what to expect when doing the re-entry.

Used to treat
> 800.000 patients (12/2017)

Triple sterile - fulfilling highest clinical standards

GET IN TOUCH:
cerabone@botiss.com

1 Brown et al. 1999
2 Tadic et al. 2004
3 Gauthier et al. 1998
4 Fathi et al. 2008
5 Panagiotou et al. 2015

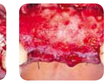
Clinical indications

> 20.000 clinical users **world-wide**

Reconstruction of the vestibular bone
Dr. K. Chmielewski, Poland

Fixation of allogeneic block graft

Application of small cerabone® granules as resorption barrier



Placement of the soft tissue graft mucoderm® as barrier membrane and for additional soft tissue augmentation

Primary wound closure

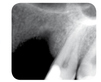
Clinical situation two months post-operative

Further clinical indications:

Implantology and Oral and CMF Surgery
- Horizontal augmentation
- Vertical augmentation
- Ridge preservation
- Peri-implant defects
- Socket preservation
- Bone defect augmentation

Periodontology
- Furcation defects (class I - II)

Ridge augmentation
Dr. A. Nader, Lebanon



Pre-operative radiographic view

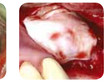
Application of small cerabone® granules

Coverage of the granules with collagen membrane

Re-entry after six months

Two-stage sinus lift with additional lateral bone augmentation
Prof. Dr. Dr. D. Rothamel, Germany

Application of large cerabone® granules



Coverage of the defect with collagen membrane

Clinical situation six months post-operative

Re-entry after six months

Regeneration of a periodontal intrabony defect
Dr. R. Cosgarea and Prof. Dr. Dr. A. Sculean, Germany and Switzerland

Intra-operative presentation of the defect

Pre-operative radiograph of the defect

Application of small cerabone® granules

Coverage with collagen membrane

X-ray 22 months post-operative: Complete defect fill

Find additional pictures, clinical cases and videos of cerabone® on www.indication-matrix.com