Micro Macroporous Bone Graft
Synthetic Resorbable
Biphasic Calcium Phosphate

MBCP+™
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**Micro Macroporous Bone Graft**

**Synthetic Resorbable Biphasic Calcium Phosphate**

MBCP+™ is a 100% synthetic, cost-effective bone graft matrix used as an alternative to biologic osteoinductive products (autograft, allograft).

MBCP+™ is a 3D interconnected matrix that mimics the trabecular architecture and the thin crystalline structure of natural bone. Its unique manufacturing process provides an optimal permeability for cells migration and angiogenesis.

MBCP+™ bone graft will be totally osteointegrated into cortical or cancellous bone of the same mechanical strength at the expense of the synthetic crystals.

**Biomatlante’s unique know-how in sintering processes creates highly absorbable microporous biphasic ceramics:**

MBCP™ and MBCP+™ exhibit high osteogenic properties for filling large bone defects, when compared to dense materials or autologous bone.

**KEY FEATURES**

<table>
<thead>
<tr>
<th>Osteoconductive</th>
<th>Provides a matrix for new bone growth</th>
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<tbody>
<tr>
<td>Molecular mixture: 20% HA and 80% TCP</td>
<td>HA alone resorbs too slowly while TCP resorbs too fast. Bi-phasic HA and TCP allow for a resorption rate similar to that of human bone</td>
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<td>70% porosity, interconnected network of macropores and micropores</td>
<td>Porosity similar to cancellous bone enables the colonization of bone cells and biological fluid uniformly within the matrix</td>
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<td>Volume Stability</td>
<td>Maintains stable bone volume over &gt; 5 years4</td>
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<td>Architecture</td>
<td>100% regeneration into new lamellar or haversian bone New vascularized, mineralized and architectural bone</td>
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<td>+30 years of clinical experience</td>
<td>Host bone formation is systematically demonstrated</td>
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<td>Safe</td>
<td>100% synthetic - 5 years shelf life</td>
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**Bioactive matrix for bone healing:**

- Promotes bone healing with gradual resorption and replacement by natural bone
- Stimulates the osteoblastic response: proliferation and differentiation

**MBCP™ technology, synthetic worldwide reference**

- 30 years of clinical experience
- Concept surgically approved in maxillofacial, dental surgeries
- The matrix of choice for bone tissue engineering in complex bone reconstruction

**Macropores and Micropores**

- Macropores are the intercrystalline spaces where dissolution and recrystallisation occurs
- Micropores are a network of interconnected spaces that promote the biological infiltration and cellular colonization by osteoblasts and osteoclasts

**Bony apatite precipitation on MBCP+™ microstructure at 12h***

**Lateral Sinus Biopsy result at 4 months***

**High specific surface area (SSA) for maximum permeability**

<2mn 100% Permeability

*Data on files, Biomatlante*
A study evaluated both the clinical and histological aspects of bone formation in maxillary sinus augmentation using MBCP™ as the bone-grafting material. MBCP™ was used as a primary bone substitute for maxillary sinus augmentation. Fifty-two patients were selected after a medical and dental examination, and were divided into the following three groups: those augmented with MBCP™ only; MBCP™ combined with irradiated cancellous bone; and MBCP™ combined with intraoral autogenous bone. After a healing period (average 6.78 months after surgery), bone cores were harvested for a histological evaluation and the implant fixtures were installed. These bone cores were evaluated via light microscope and implants were followed up for at least six months after loading.7

Matrix of choice for bone augmentation

RESULTS: Four to ten months after surgery, new vital bone surrounding the MBCP™ particles was the conclusion observed in 18 bone biopsies. Two out of the 130 implants installed were explanted due to a failure of osseointegration before the prosthetic procedure. All the remaining implants were functioning for 6 to 27 months (average 12.96 months).7

CONCLUSION: These results show that MBCP™ can be used as a grafting material for sinus floor augmentation, whether combined with other bone graft materials or not, and lead to a predictable prognosis for dental implants in the posterior maxillary area where there is insufficient vertical height for fixture installation. The cumulative survival rate of the implants was 98.46%.7
How to use it

**Vial**
Dispense the content of the vial into a sterile container for the preparation of the material.

**Hydrate the content** with sterile saline in order to prevent an osmotic reaction.

**Syringe**
Hydrate the content by drawing the sterile saline through the filter cap until liquid level is slightly above the level of the granules.

Expel excess liquid by gently pushing the syringe plunger.

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ISO 13485
Read the Instructions for use
Medical Device Class: III

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**Biomatlante Therapeutic Solutions**

Option 1: •••  Option 2: ••  Association: •

<table>
<thead>
<tr>
<th>IMPLANTOLOGY</th>
<th>MBCP+™ Granules S 0.5-1mm</th>
<th>MBCP+™ Granules L 1-2mm</th>
<th>In’Oss™ Putty</th>
<th>EZ Cure™ Membrane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sinus lift Augmentation</td>
<td>Minimum Crest Height &lt; 4-5mm</td>
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<tr>
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<td>Minimum Crest Height &gt; 5mm with primary stability</td>
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<td>Vertical Ridge Augmentation</td>
<td>•••</td>
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<td>Horizontal Alveolar Ridge Augmentation</td>
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<td>Alveolar regeneration - Extraction socket</td>
<td>Without implant placement</td>
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<tr>
<td></td>
<td>With implant placement</td>
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<tr>
<th>PERIODONTOLOGY</th>
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<tbody>
<tr>
<td>Intra-osseous pockets</td>
<td>•••</td>
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<tr>
<td>Furcations</td>
<td>•••</td>
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</tbody>
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<td>Autograft Extender</td>
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**References**


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Manufacturer:
Biomatlante
ZA Les Quatre Nations
5 Rue Edouard Belin
44360 Vigneux de Bretagne - France
www.biomatlante.com

Distributed by:

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