

Bone Graft Material

Best choice of
Bone Graft Material



Bone Graft Material

004 **I. Auto-Max™**

008 **II. Mega-Oss™**

009 **III. Mega-Oss Bovine™**

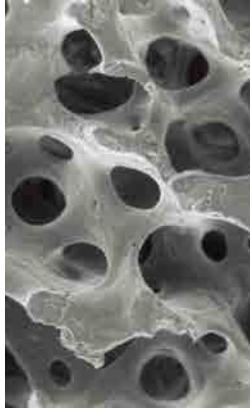
010 **IV. Bone Matrix I**

011 **V. Bone Plus™**

Bone Graft Material



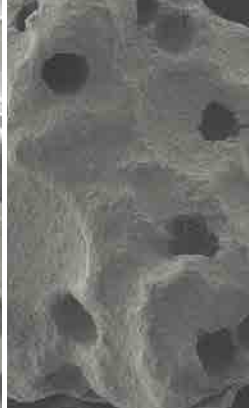
Autogenous Bone Harvester
Auto-Max



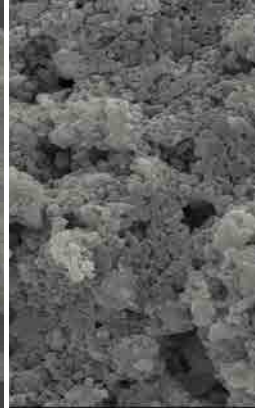
Allograft
Mega-Oss



Xenograft
Mega-Oss Bovine



Synthetic
Bone Matrix I
(BCP, HA; β -TCP)



Synthetic
Bone Plus(BCP, HA; β -TCP)

We understand your **PREFERENCES** of bone graft materials so we have prepared **ALL** options for an ideal regeneration.

MegaGen's suggestion for Bone Graft Material

Autogenous Bone Harvester Auto-Max

Allograft Mega-Oss

Xenograft Mega-Oss Bovine

Synthetic Bone Graft Bone Matrix I (BCP, HA; β -TCP=60:40)

Synthetic Bone Graft Bone Plus(BCP, HA; β -TCP=60:40)

We are proud of the **SUPERIOR QUALITY** of our bone products and you will be happy with our **COMPETITIVE PRICES**.

We strictly control **PARTICLE SIZE** of graft materials (400-750 μ m), and maintain **HIGHER INTERCONNECTED POROSITY** for angiogenesis.

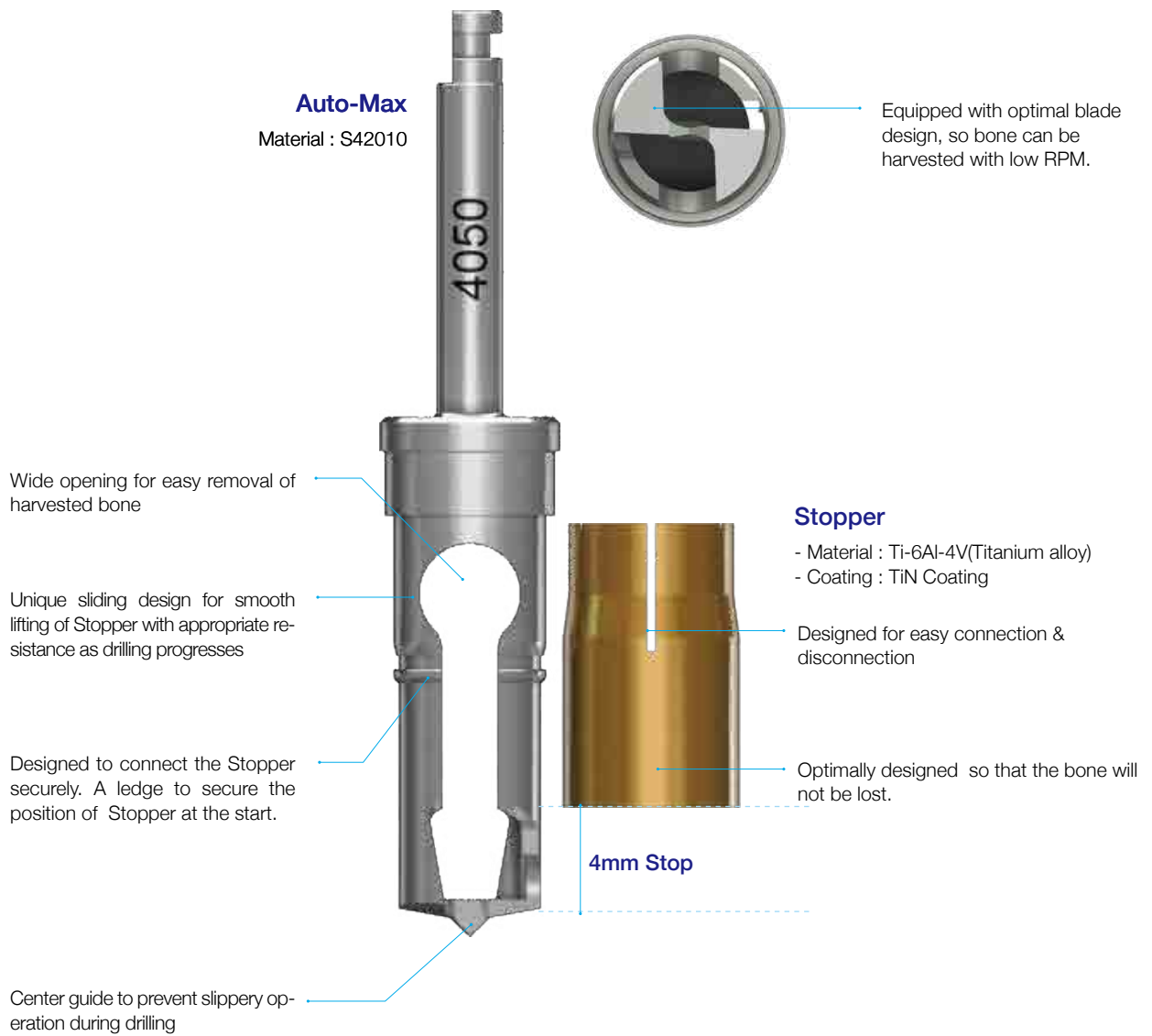
Available products may vary by Country due to registration process.
Thank you for your understanding in advance.

I. Autogenous Bone Harvester **Auto-Max™**



Description	Ref.C	Spec.
Auto-Max	AM2535	Ø2.5-Ø3.5 / Stopper
	AM4050	Ø4.0-Ø5.0 / Stopper
	AM5060	Ø5.0-Ø6.0 / Stopper
	AM6070	Ø6.0-Ø7.0 / Stopper

1. Design Concept

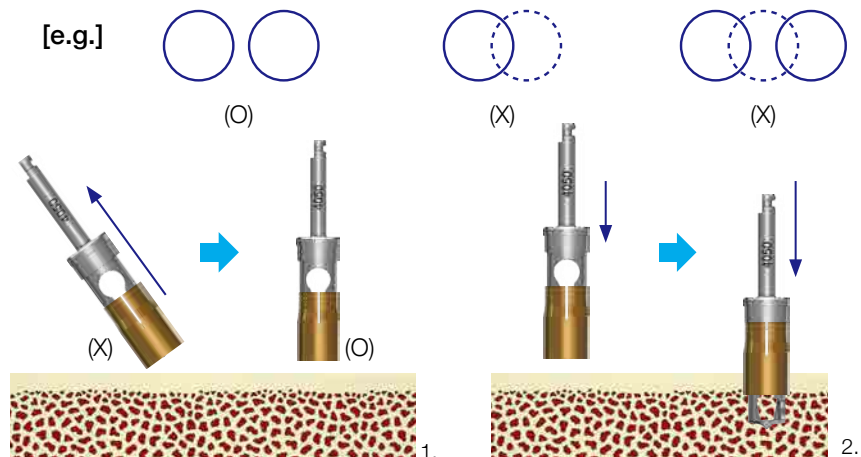


2. How to use

1. Connect an Auto-Max to the handpiece and position the stopper on the Auto-Max.
2. The Auto-Max should meet the bone surface perpendicularly. Press the handpiece to fix the sharp point of the drill on the bone, and start drilling at about 300~500 rpm with copious irrigation.
3. Do not pump during harvest. Pumping may scatter the harvested bone.
4. The Auto-Max will automatically stop ped at bone depth of 4mm.
5. Disconnect the stopper from Auto-Max and collect particulated autogenous bone in a sterilized tray.

Repeat steps 1~5 until the desired volume of bone is obtained.

6. Bone should be harvested from a new site each time, avoiding overlap with other harvest sites.



3. Products



➔ Clinical Cases

- Courtesy of Dr. Kwang-Bum Park

Fig 1. Severe periodontitis on # 35 was extracted 2 months before.



Fig 2. #34 was extracted and the socket was degranulated thoroughly.

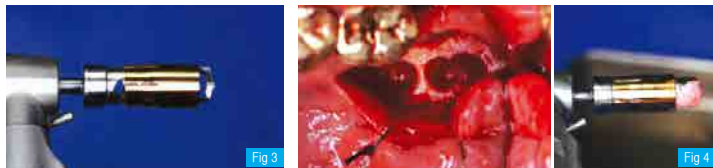


Fig 3. Auto-Max was prepared for bone harvesting.

Fig 4. Autogenous bone was harvested from the ramus.

Fig 5. The defect was filled with harvested autogenous bone following implant placement.



Fig 6. Intra-oral radiograph immediate after surgery.

Fig 1. The prosthetics on the mandibular right molar were broken with secondary caries.



Fig 2. Three implants were placed after extraction and degranulation of residual roots. All the implants showed bone defects.



Fig 3. Auto-Max harvested autogenous bone from edentulous area.

Fig 4. The autogenous bone was mixed with Mega-Oss bovine to increase the volume of graft.

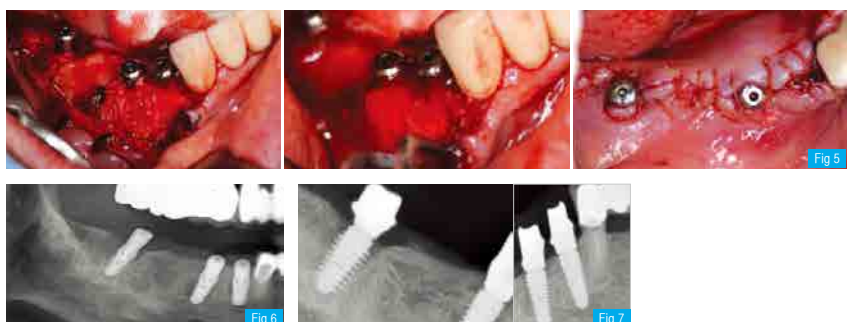


Fig 5. The defects were filled with the graft mixture and covered with a collagen membrane.

Fig 6. The panoramic radiograph taken immediately after surgery.



Fig 7. Intra-oral radiographs taken after delivery of customized abutments.



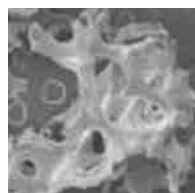
II. Allograft **Mega-Oss™** (Korea Only)

1. 100% young, and healthy US donor for US & EU market, 100% young, and healthy Korean donor for Korean and Asian market.
2. FDBA (Freeze Dried Bone Allograft).

Description	Ref.C	Package size
Mega-Oss	MOB025	0.25cc
	MOB050	0.5cc
	MOB100	1.0cc
	MOB100L	1.0cc



3. Ideal Combination of Cancellous (60%) & Cortical (40%) bone.



Cancellous Powder (60%)

Promotes cell adhesion, bone remodeling and reformation of blood vessels.



Cortical Powder(40%)

Cortical Bone has a slow infiltration capacity, enabling the maintenance of space in grafted areas.

4. Strictly selected particle size (400~710µm).

Small particles($\leq 250\mu\text{m}$) may provoke inflammatory response rather than osseous regeneration. We don't have this kind of small dusts in the Mega-Oss™.



Mega-Oss™



Company L

NEW PRODUCT

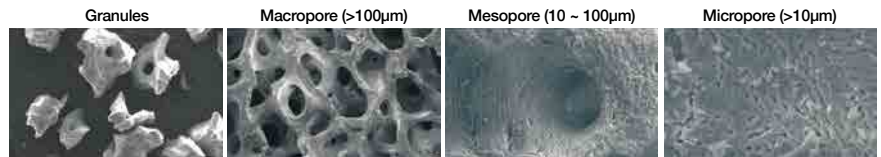
III. Xenograft Mega-Oss Bovine™

Type	Ref.C	Weight	Package size
Small Granules	IOSG025	0.25g	0.54cc
	IOSG050	0.50g	1.08cc
	IOSG100	1.0g	2.16cc
Large Granules	IOLG050	0.5g	2.0cc
	IOLG100	1.0g	4.0cc



1. Features

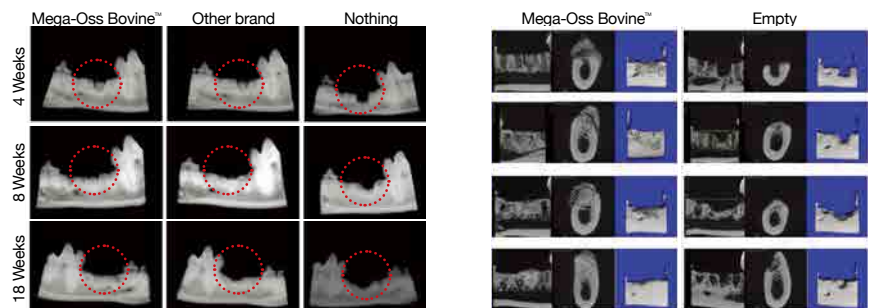
- Mega-Oss Bovine™ is chemically, as well as structurally, comparable to mineralized human bone (nanocrystalline natural apatite). It is available in granule form. It is supplied sterile and is dedicated for single-use.



The Presence of a macroporous structure favors cell ingrowth while the micropores allow the penetration of body fluids into the implant.

- The best internal surface area(88.2m²/g) in the world, which is more than 10% of other products. Bone chips are remained after bone grafting and the volume is not reduced, which can increase the rate of bone formation and bone mass.
- Low temperature manufacturing process brings the result of high purity refinement/ and excellent consistency. When saline is hydrated, it is well-organized and not easily crushed, so the satisfaction of the practitioner is very high.
- Mega-Oss Bovine™ is a natural hydroxyapatite bone grafting material derived from Australia Bovine (BSE free).

2. Effective Bone Substitution



3. Clinical Case



NEW PRODUCT

IV. Synthetic bone graft material **Bone Matrix I**

(BCP, Biphasic Calcium Phosphate)

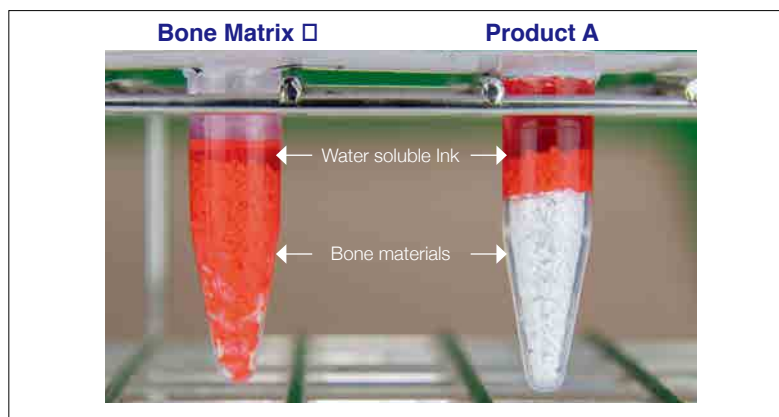
Consist of HA & β -TCP = 60 : 40 with purity raw materials

Description	Ref.C	Granule size (mm)	Package size
Bone Matrix I	BM10601	0.6~1.0	0.15g
	BM10602		0.25g
	BM10605		0.50g
	BM10610		1.00g
	BM10801	0.8~1.2	0.15g
	BM10802		0.25g
	BM10805		0.50g
	BM10810		1.00g

(0.15g \approx 0.25cc)

1. Easy handling and fast bone regeneration with excellent blood wetting

- Wetting Test



A comparative photograph immediately after dropping water-soluble ink on the bone graft material.

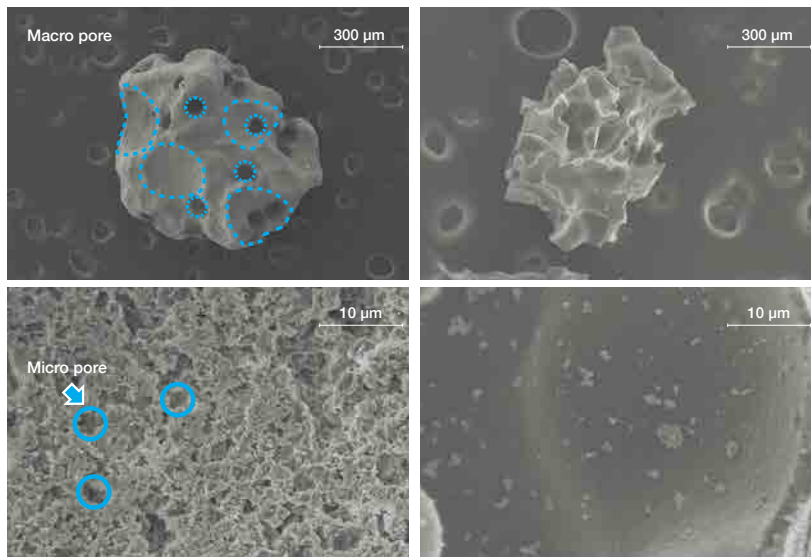
2. A wider surface area with a particle shape that minimizes soft tissue stimulation

Bone matrix I	Product A
3.97m ² /g	1.93m ² /g

Porosimeter analysis(Quantachrome, PM33GT)

3. A combination of Macro and micro pore that accelerates bone regeneration

[Pore size]
 Micro pore : 10~50 μ m
 Macro pore : 100 ~ 500 μ m



Bone Matrix I

Product A

4. Minimize debris generation through additional production process



Bone Matrix I



Product A

Product coordinator : rmd_bio3@imegagen.com

V. Synthetic bone graft **Bone Plus™**

(BCP, Biphasic Calcium Phosphate)

Description	Ref.C	Package size
BCP EAGLE EYE	MGSB0802	0.25g
	MGSB0805	0.50g
	MGSB0810	1.00g
	MGSB0820	2.00g
BCP BULLS EYE	MGSB1002	0.25g
	MGSB1005	0.50g
	MGSB1010	1.00g
	MGSB1020	2.00g

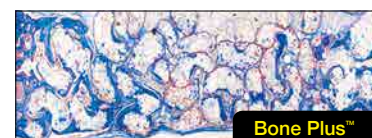
1. Ideal combination of HA & β-TCP(60:40)

2. Specially designed particle shape does not irritate recipient tissue



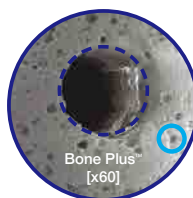
3. Histomorphometric results (4 weeks, mouse skull)

Group	N	Mean
Bone Plus™	5	21.5±2.7
MBCP(BCP)	5	10.3±4.6
Osteon(BCP)	5	11.8±3.0
Bio-Oss(Bovine)	5	11.5±4.6
Cerasorb(β-TCP)	5	7.6±1.4

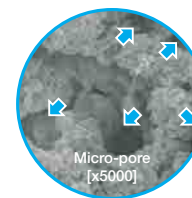


Amount of newly formed mineralized Bone tissue (NB%), 4 weeks

4. Harmony of macro- and micro- pores



☛ Macro-pore of 400-500µm is ideal for angiogenesis and bone ingrowth.

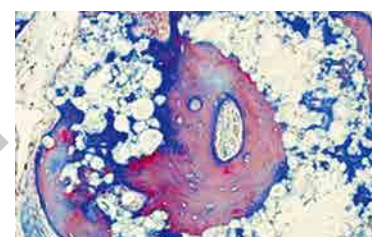


☛ Micro-pore, interconnected, of 10-50µm provide spaces for ion-exchange.

5. Excellent bone ingrowth to macro-and micropores



Small biopsy containing was harvested from the ridge between two fixtures to verify the quality of regeneration with a trephine.



Trichrome stain

Bone Graft Material



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