

MedPark

BOSS
NEW BONE NEW LIFE

BOVINE BONEGRAFT
NATURAL BONE SUBSTITUTE

Manufactured by **MedPark**

BOVINE BONEGRAFT

Bovine bonegraft manufactured by Sintering Technology of MedPark

Biocompatibility



- High blood permeability, similar pH to body fluids, rapid new bone formation without inflammatory reactions
- Sticky bone formation through PRF and CGF with independent process technology

Excellent Pore Structure



- Selection of proper size of graft materials for suitable environment for bone regeneration
- Increased micropores allows the migration of osteoblasts for increasing new bone formation

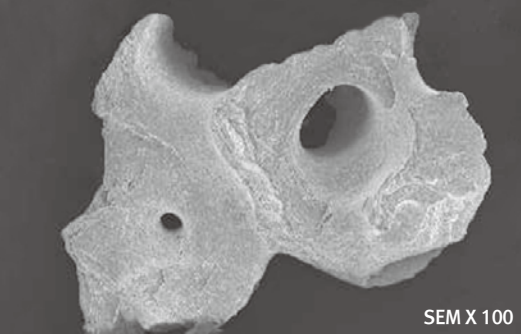
Easy Manipulation



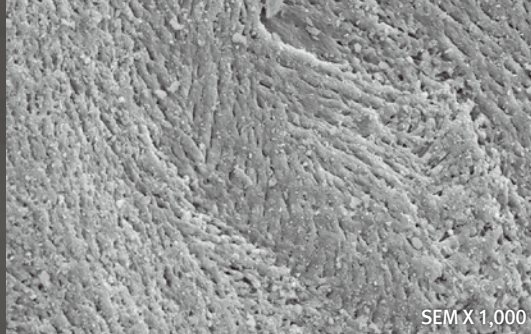
- Enhanced hydrophilicity allows user to manipulate easily
- Applicable to various indication such as Socket Preservation, Sinus lift, Periodontal Defects and Ridge Augmentation

Specifications

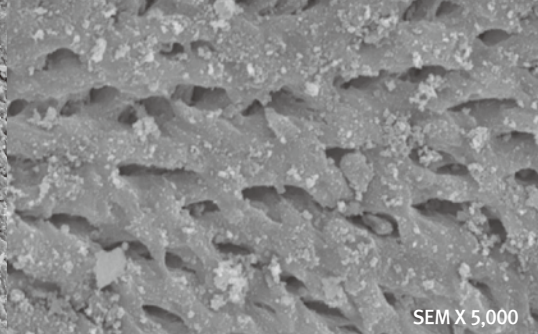
Animal source	Type	Size (mm)	Weight (g)	Volume (cc)
Bovine	Powder	0.2 ~ 1.0	0.15	0.3
			0.25	0.5
			0.5	1.0
			1.0	2.0
	Chip	1.0 ~ 2.0	0.25	0.75
			0.5	1.5
			1.0	3.0
			2.0	6.0



SEM X 100



SEM X 1,000



SEM X 5,000

Perforations similar to human bones

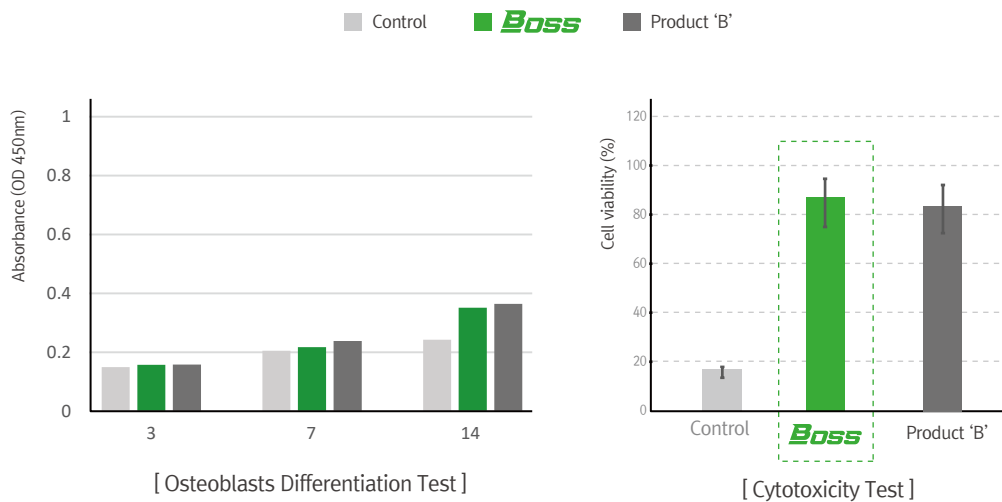
High pore rate confirmed by the Porosimeter Test

Rough surface of microstructure makes osteoblast stick to the surface easily

(* Measure the size and pore rate of pores present on the sample surface by adsorbing mercury on the specimen)

Type	Product	Porosity (%)
Powder	BOSS	70.20
	Company 'A'	48.74
	Company 'B'	36.36

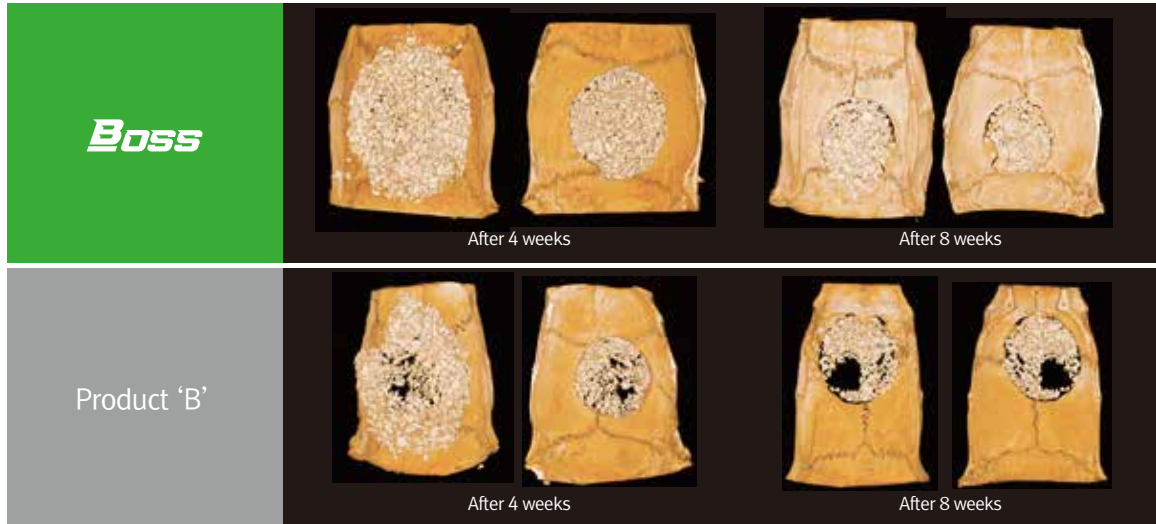
Excellent bone formation & biocompatibility



- **Safe and stable bonegrafts without toxicity**
- Cell survival rate was equivalent to that of the Product 'B'
- Complete safety and stability verification as bonegraft
- **Excellent biocompatibility**, good differentiation of osteoblasts

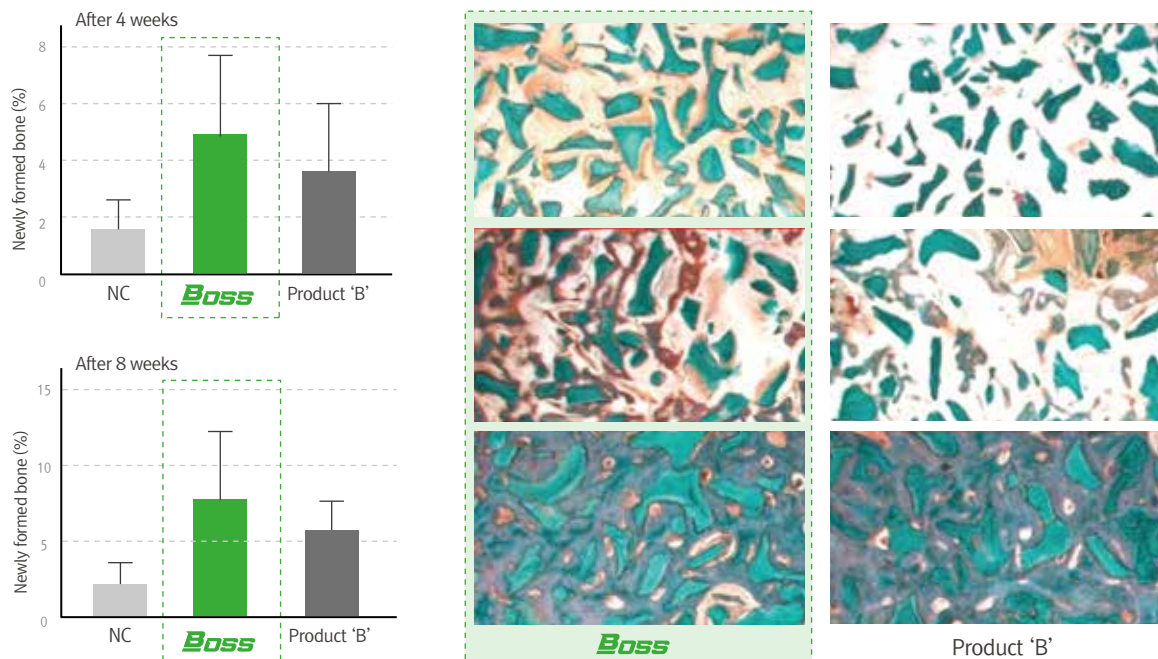
Preclinical case

Space maintenance test (Micro CT) : Small Animal (Rat)



- Superior space provision after 4 and 8 weeks in defect when compared to product 'B'

New bone formation test (H&E Stain) : Large Animal (15 Dogs, Beagle)



Clinical case



1
Preoperative X-ray



2
Incision of the affected part



3
Fixture placement



4
Application of BOSS



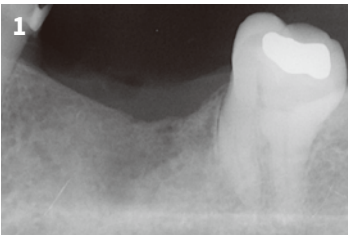
5
Application of CGF Membrane



6
Temporary Prosthesis



7
Postoperative X-ray



1
Preoperative X-ray



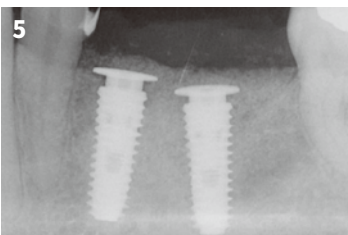
2
Fixture placement



3
Application of BOSS



4
Application of COLLA



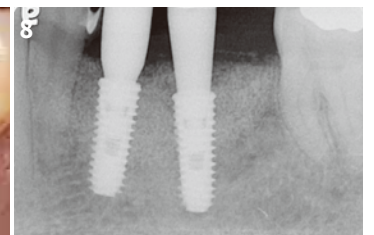
5
Postoperative X-ray



6
After 3 months
(Detection of keratinized tissues)



7
2nd Surgery
(Successful Bone formation)



8
X-ray After 2nd Surgery

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- AntoR Murugan et al., 2002, Heat-deproteinated xenogeneic bone from slaughterhouse waste : Physico-chemical properties, *Indian Academy of Sciences*. Vol. 26,523–528
- Al Pearce et al., 2007, Animal models for Implant biomaterial research in Bone: A review, *European Cells and Material* Vol. 13. 2007
- Jungheon Lee et al., 2017, Physicochemical characterization of porcine bone-derived grafting material and comparison with bovine xenografts for dental applications, *J Periodontal Implant Sci*. 2017 Dec;46(6):388–401

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