

# Ti-OSS<sup>®</sup>

## CANCELLOUS SUBSTITUTE

**Leading regeneration with  
quality, reliability, affordability**

Manufactured with the highest quality standard  
moves your practice to high success rate and  
safety.



KFDA



Ti-oss, natural bovine cancellous substitute becomes

## New GOLD STANDARD in Xenograft.

### Bone Graft

#### Ti-oss



#### Ti-oss Syringe



#### Ti-oss Block



Our manufacturing technical level and Ti-oss quality

**do not allow comparison to  
any products in the world.**

#### Multiporosity structure

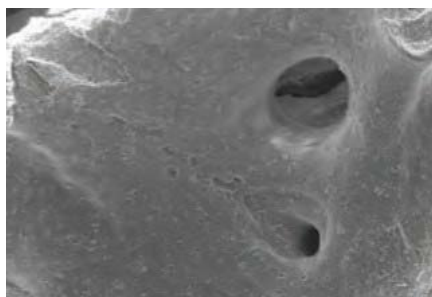
Ti-Oss is made from 100% cancellous bone without any cortical portion. Innovative pulverizing technique allows multiporous structure, maximizing blood vessel ingrowth.



#### Pore size



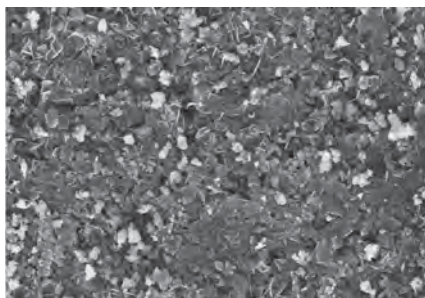
(Ti-oss SEM image x 100)



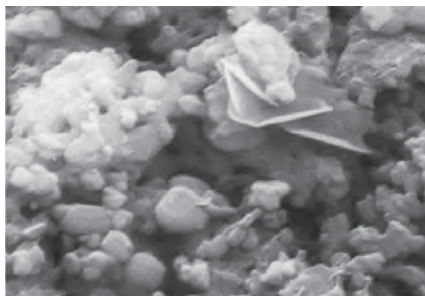
(A Co. SEM image x 100)

#### octacalcium Phosphate Crystal

Pre HA structure, octacalcium phosphate crystal is found on the surface of Ti-Oss, resulting in fast bone formation.



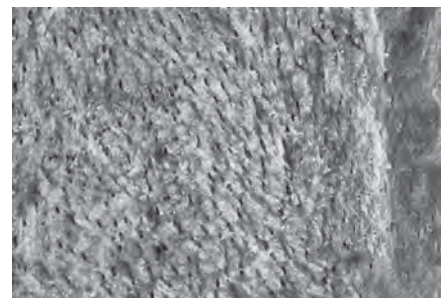
(SEM image x 10,000)



(SEM image x 50,000)

#### osteoconductive surface

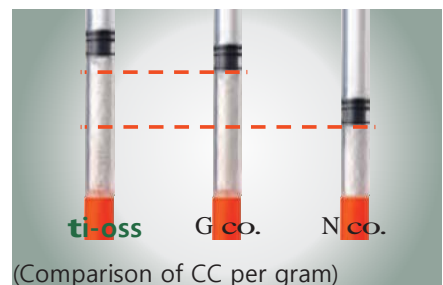
Low temperature processing technique allows ideal, natural surface topograph, the same as human bone, stimulating osteoblast activity. Vitrification phenomenon caused by high temperature process has been completely controlled.



(SEM image x 3,000)

#### Large Volume

Unique 100% multiporous cancellous nature offers higher quantitative mass volume per gram unit, compared to other nonporous product. This leads to less material cost.



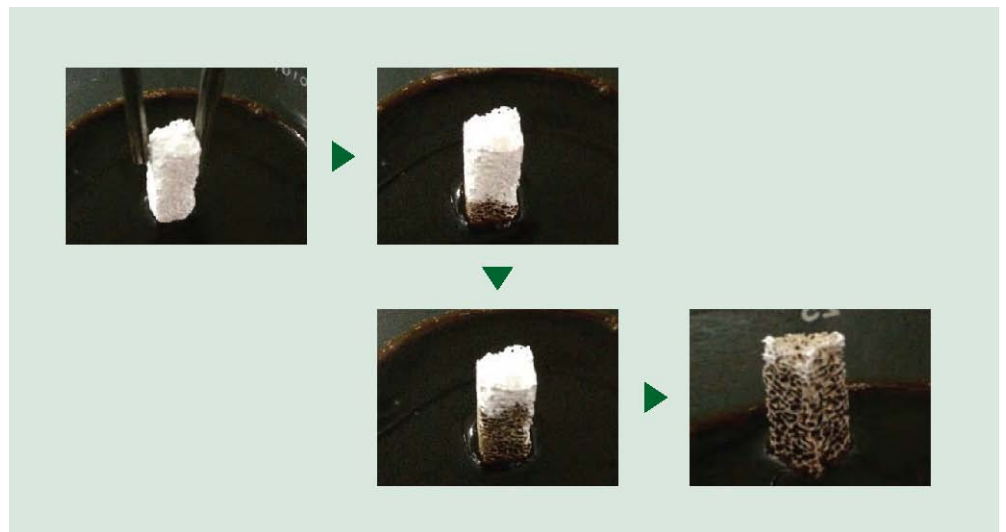
(Comparison of CC per gram)

# Ti-oss New Product

## Ti-oss Block



Whole block of Ti oss opens new horizon to Bone grafting technique with these special fact. Average Ti oss pore size is more than three times of other world leading product. This advanced manufacturing technique permits rapid absorption of blood or saline into the block, allowing ingrowth of blood vessel and osteoblasts. Stabilization of Block is easily achieved by carving with surgical blade and adaptation in the patient mouth. Titanium screw or PRP fixation is possible.



## Ti-oss Syringe



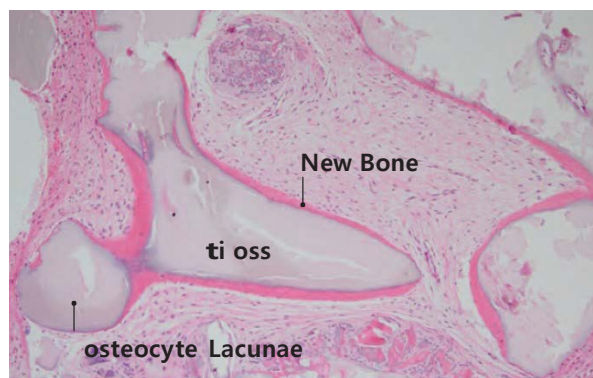
Ti oss particle is filled into the syringe form for easy handling onto the wound site. Several drops of Blood, saline, PRP at the entrance of syringe allows wetting whole Ti oss particles in the syringe. Unique Ti oss pore size makes this possible.



# Human Biopsy result

Osteoconductive nature of Ti oss surface was evaluated by biopsy specimens. Consistent new bone formations were noted in several different clinical cases. reliability of Graft success, early bone formation, Observation of Osteocyte Lacunae

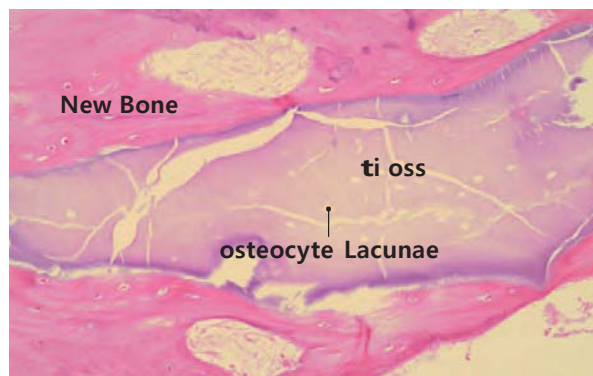
## 3 Months Biopsy Findings



Hospital : Myungin Dental  
Lee, Myung Ho, D.D.S  
Surgical No. : b-12-238488

Date : 2012.11.12  
Pictured by : S.a.Lee MD

## 4 Months Biopsy result



· Research Report date;  
May, 2012

· Kim, Sun Young, D.D.S.  
Prosthodontist

· Suplant Dental Clinic  
Seoul, Korea

## 4 Months Biopsy



Mandibular left second molar

Ham, Byungdo, DDS, Periodontist  
Seoul Korea

# Animal Comparison ; Multiporosity, Pore size, Natural topograph, octacalcium Phosphate

Make Significant Clinical Difference due to following factors.

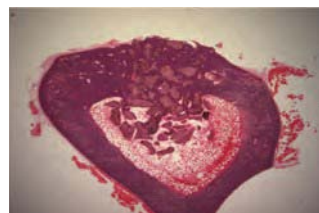
1. angiogenesis by Porosity design.
2. Osteoblast movement by Natural Topograph
3. Fast Bone Formation by Octacalcium Phosphate

Please look at the animal data.

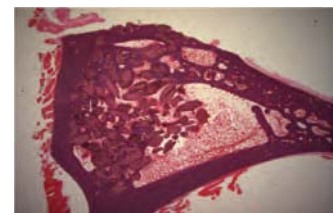
## ti-oss



rabbit Tibia 12 weeks  
- Ti oss New Bone well  
formed

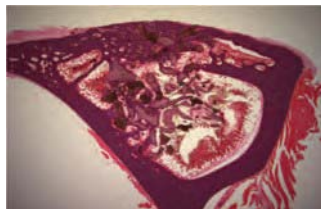


rabbit Tibia 12 weeks  
-Ti oss Densely formed



rabbit Tibia 12 weeks  
-Ti oss excellent  
Osteoconductivity

## Competitor



rabbit Tibia 12 weeks  
- "A" Co Loosely formed Bone



rabbit Tibia 12 weeks  
- "A" Co Loosely formed  
Bone

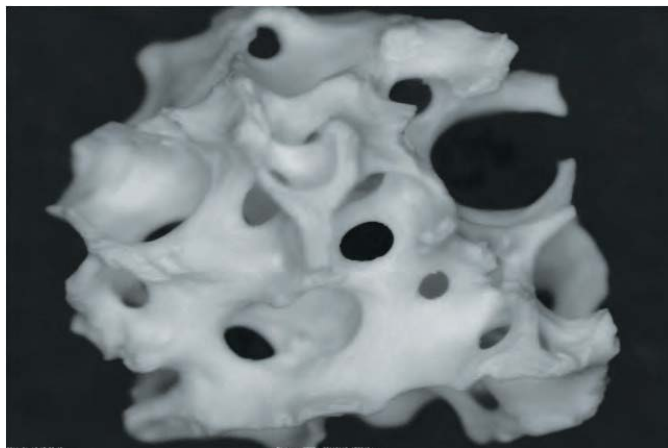


rabbit Tibia 12 weeks  
- "A" Co Loosely formed Bone

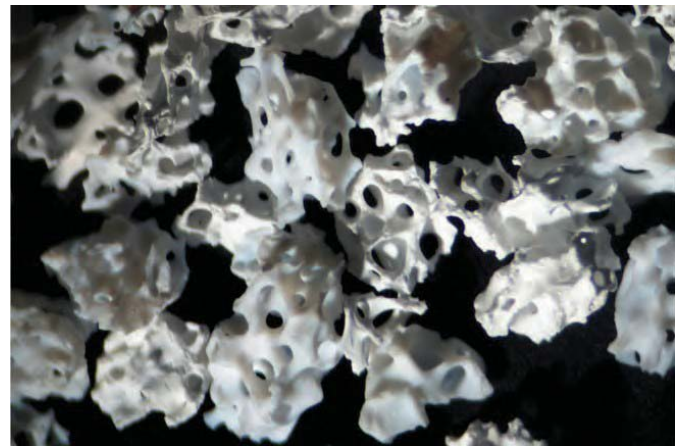
# Microscopic Comparison

Ti - oss multiporosity allows maximum angiogenic process, which is critical in first 2 weeks of initial bone healing stage. Osteoblast, oxygen, nutrients can not be supplied into the graft without blood vessel.

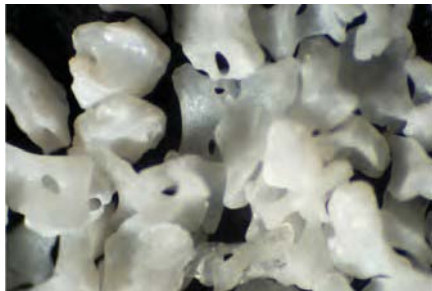
Ti - oss guarantees maximum revascularization into the graft, leading to high bone formation.



Gold Standard - Multiporosity



Uniformity of Ti - oss



"a" Co. Nonporous Glassified Surface



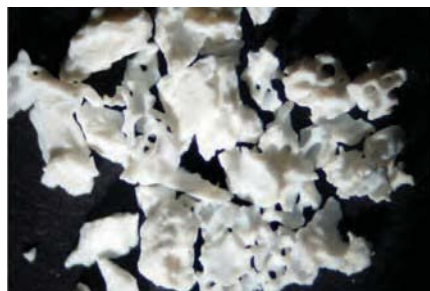
"a" Co. Damaged Porosity



"a" Co. all Cortical Particles



"B" Co. Nonporous Glassified



"C" Co. Cortical Particle Included



Introduction of Ti-oss to the world dental society is an honor. We have been researched over 2 years to reach the highest quality, developing new innovative processing techniques. Our goal is to serve dental profession with reliability, safety. ti-oss will strive for the future of tissue engineering and research.



No.	Product / Weight	Size
25-0512	Ti-oss 0.25g / 0.6cc	0.5 - 1.2mm
05-0512	Ti-oss 0.5g / 1.2cc	0.5 - 1.2mm
10-0512	Ti-oss 1.0g / 2.3cc	0.5 - 1.2mm
20-0512	Ti-oss 2.0g / 4.5cc	0.5 - 1.2mm
25-1217	Ti-oss 0.25g / 0.8cc	1.2 - 1.7mm
05-1217	Ti-oss 0.5g / 1.5cc	1.2 - 1.7mm
10-1217	Ti-oss 1.0g / 3.0cc	1.2 - 1.7mm
20-1217	Ti-oss 2.0g / 6.0cc	1.2 - 1.7mm

## Ti-oss Syringe



No.	Product / Weight	Size
S25-0512	Ti oss syringe 0.25g / 0.6cc	0.5 - 1.2mm
S05-0512	Ti oss syringe 0.5g / 1.2cc	0.5 - 1.2mm
S25-1217	Ti oss syringe 0.25g / 0.8cc	1.2 -
S05-1217	Ti oss syringe 0.5g / 1.5cc	1.2 -

## Ti-oss Block



No.	Product / Weight	Size
25-0210	Ti oss 0.25g / 0.44cc	0.2 - 1.0mm
05-0210	Ti oss 0.5g / 0.8cc	0.2 - 1.0mm
10-0210	Ti oss 1.0g / 1.51cc	0.2 - 1.0mm
20-0210	Ti oss 2.0g / 2.98cc	0.2 - 1.0mm

No.	Product	Size
BLK8812	Ti oss Block	8 x 8 x 12mm
BLK8825	Ti oss Block	8 x 8 x 25mm