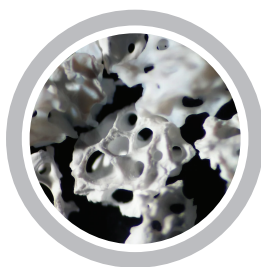


TI-OSS

Concellous Substitute



AFRA TEB AVA
MEDICAL EQUIPMENTS

//New GOLD STANDARD in Xenograft

Ti-oss®



Ti-oss®, made from 100% BSE-free approved Australian Bovine bone origin, is a biocompatible, highly porous, inorganic mineral matrix designed for dental regenerative applications. It has been tested, researched, and used by dental surgeons all around the world and its quality, reliability, and safety have been supported by 5 year clinical data.

Ti-oss® Syringe



Ti-oss® particle is filled into the syringe form for easy handling onto the wound site. Thanks to its unique pore structure, several drops of blood, saline, and PRP at the entrance of the syringe allow wetting of whole Ti-oss® particles in the syringe.

Ti-oss® Block



The whole block of Ti-oss® opens a new horizon to the Bone grafting technique. with these special facts. The average Ti-oss® pore size is more than three times of other world-leading products. This advanced manufacturing technique permits rapid absorption of blood or saline into the block, allowing the ingrowth of blood vessels and osteoblasts. Stabilization of the Block is easily achieved by carving with a surgical blade and adaptation in the patient mouth. Horizontal matrix suture or PRP fixation is possible.



Ti-oss® Guide



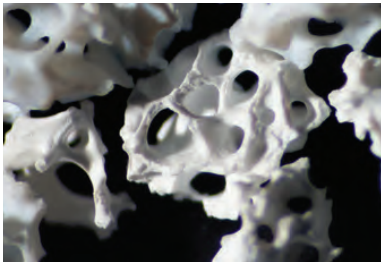
Ti-oss Guide® is an absorbable and implantable atelocollagen membrane that is intended for tissue regeneration procedures. Ti-oss Guide® is crosslinked using 1-ethyl-3-(3-dimethyl aminopropyl) carbodiimide (EDC) for the resistance to enzymatic degradation. Ti-oss-Guide® provides a stable barrier for 3~6 months and optimized physical property.

//Unique in the World

Our manufacturing technical level and Ti-oss quality do not allow comparison to any products.

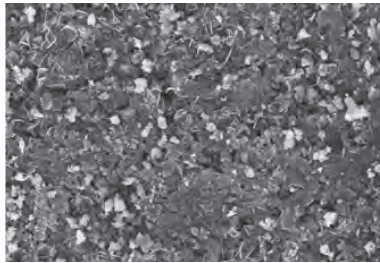
Multiporosity Structure

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



Osteopromoting Factor

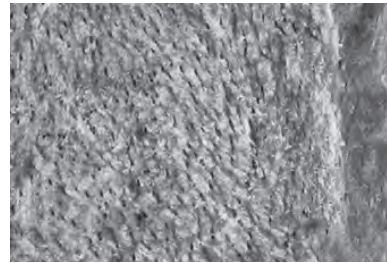
Pre HA structure is found on the surface of Ti-oss[®], resulting in fast bone formation.



(SEM image x 10,000)

Osteoconductive Surface

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

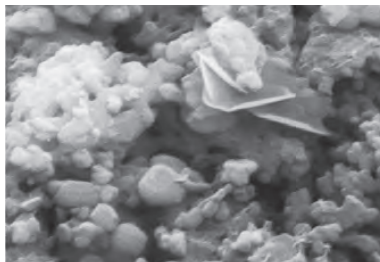


(SEM image x 3,000)

Pore size



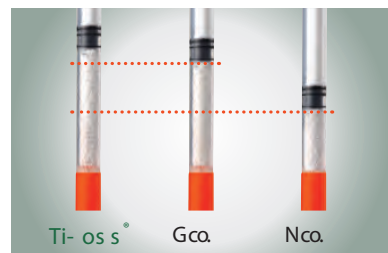
(Ti-oss[®] SEM image x 100)



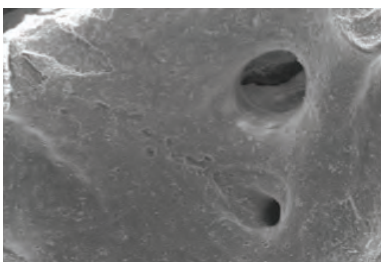
(SEM image x 50,000)

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)

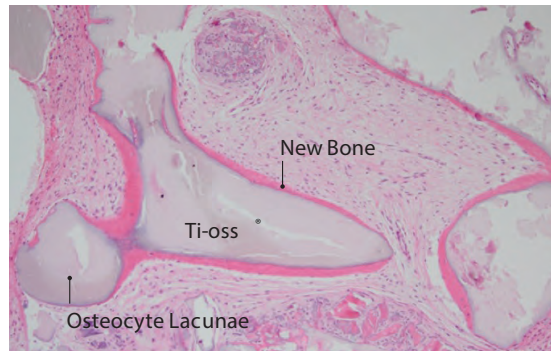


(A Co. SEM image x 100)

//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 formations, observation of Osteocyte Lacunae.

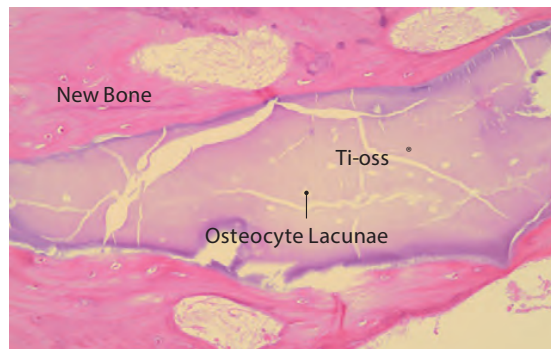
3 Months Biopsy Findings



Hospital : Myungin Dental
Lee, Myung Ho, D.D.S
Surgical No. : b-12-23 84 88

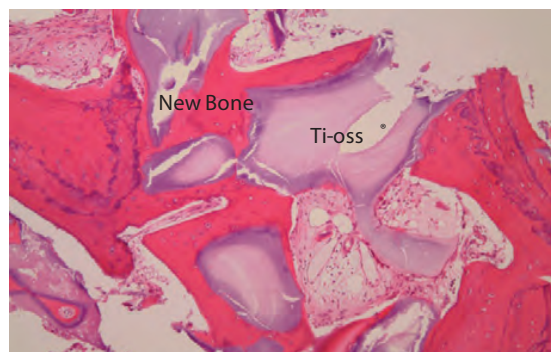
Date : 2012.11.12
Pictured by : S.A.LEE MD

4 Months Biopsy Results



• 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

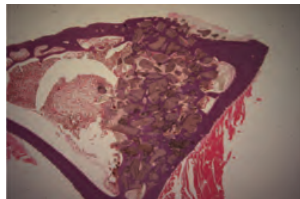
Multiporosity, Pore Size, Natural Topograph

Make significant clinical difference due to following factors.

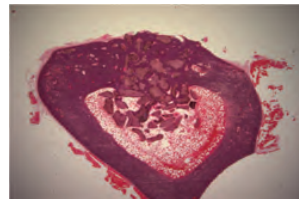
1. Angiogenesis by Porosity design.
2. Osteoblast movement by Natural Topograph.
3. Fast Bone Formation by Pre HA structure.

Please look at the animal data.

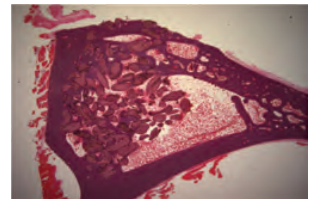
Ti-oss[®]



Rabbit Tib ia 12 weeks
- Ti-oss[®] New Bone well formed

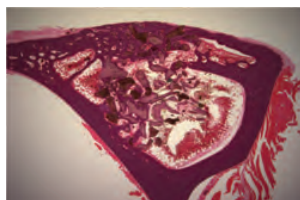


Rabbit Tibia 12 weeks
- Ti-oss[®] Densely formed

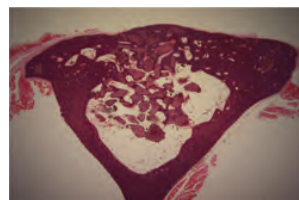


Rabbit Tibia 12 weeks
- Ti-oss[®] Excellent
Osteoconductivity

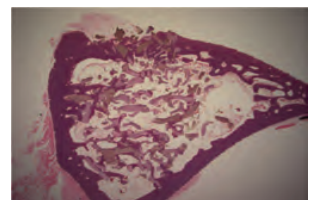
Competitor



Rabbit Tib ia 12 weeks
- "A" Co Loosely formed Bone



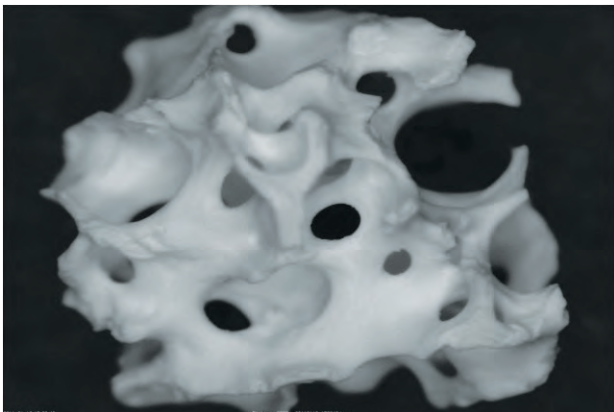
Rabbit Tibia 12 weeks
- "A" Co Loosely formed Bone



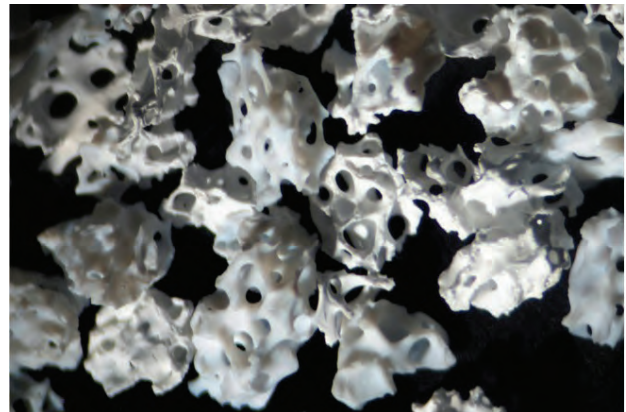
Rabbit Tibia 12 weeks
- "A" Co Loosely formed Bone

//Microscopic Comparison

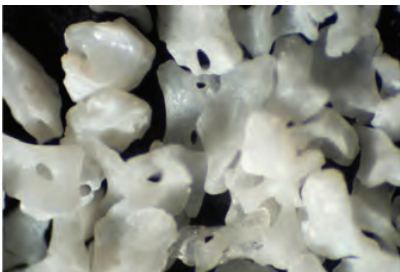
Ti-oss multiporosity allows maximum angiogenic process, which critical in first 2 weeks of initial bone healing stage. Osteoblast , oxygen, nutrients can not be supplied into the graft without blood vessel. Ti-oss gurantees maximum revascularization into the graft, leading to high bone formation.



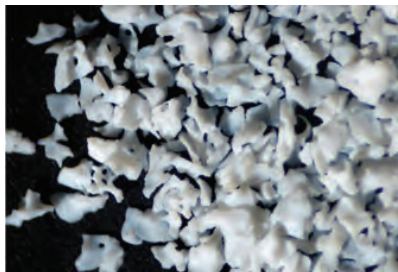
Gold Standard - Multiporosity



Uniformity of Ti-oss[®]



"A" Co. Nonporous Glassified Surface



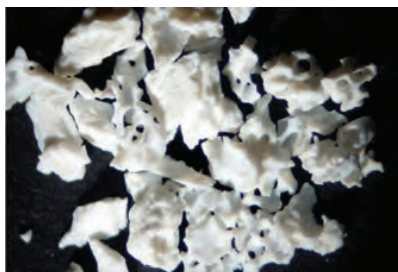
"A" Co. Damaged Porosity



"A" Co. All Cortical Particles



"B" Co. Nonporous Glassified



"C" Co. Cortical Particle Included

//Rat Model

Ti-oss resorption by Osteoclast found on 8 weeks rat model.

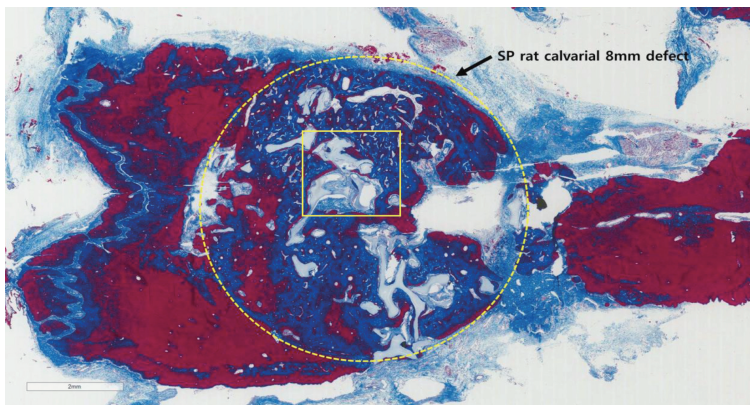
Jun, Sangho, DDS, MS, Ph.D

Korea University Hospital, Dental Division, Oral and maxillofacial department

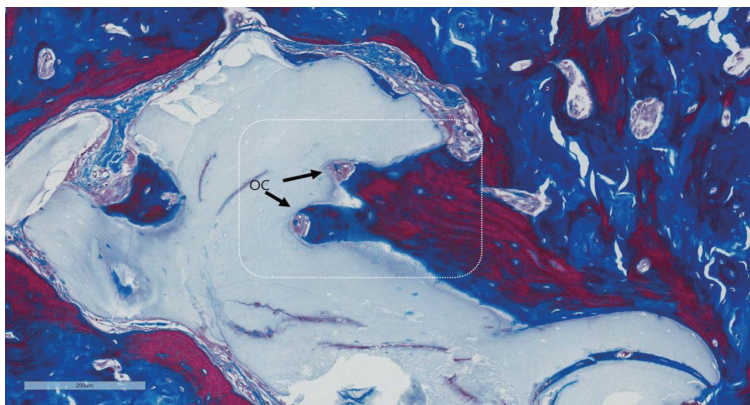
Ryu, Jaejan, DDS, MS, Ph.D

Korea University Hospital, Dental Division, Prosthodontic department

In 8 weeks after the placement of Ti - oss[®] bone graft,
rat calvarial defect has been filled into the defect centre



Ti - oss[®] resorption by Osteoclast started 8 weeks after the
placement of Ti - oss[®] graft onto the surgical defect.
(yellow square)



//Ordering Information

Ti-oss[®]



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/0.75cc	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
25-0210	Ti-oss [®] 0.25g/0.5cc	0.2 - 1.0mm
05-0210	Ti-oss [®] 0.5g/1.1cc	0.2 - 1.0mm
10-0210	Ti-oss [®] 1.0g/2.1cc	0.2 - 1.0mm
20-0210	Ti-oss [®] 2.0g/4.1cc	0.2 - 1.0mm

Ti-oss[®] Guide



No.	Product / Weight	Size
DTG-10002	Ti-oss [®] Guide	15 x 30mm

//Ordering Information

Ti-oss[®] Syringe



No.	Product / Weight	Size
S25-0512	Ti-oss [®] 0.25g/0.6cc	0.5 - 1.2mm
S05-0512	Ti-oss [®] 0.5g/1.2cc	0.5 - 1.2mm
S25-1217	Ti-oss [®] 0.25g/0.75cc	1.2 - 1.7mm
S05-1217	Ti-oss [®] 0.5g/1.5cc	1.2 - 1.7mm
S25-0210	Ti-oss [®] 0.25g/0.55cc	0.2 - 1.0mm
S05-0210	Ti-oss [®] 0.5g/1.1cc	0.2 - 1.0mm

Ti-oss[®] Block



No.	Product / Weight	Size
BLK8812	Ti-oss [®] Block	8x8x12mm
BLK8825	Ti-oss [®] Block	8x8x25mm



www.afra-tebava.com

Unit 151, 5th Floor, Ronica Palace
Commercial Office Park,
Ashrafi Esfahani Expy, Tehran
Tel: +98 21 1732