DIO IMPLANT

MedPark

COLLA

RESORBABLE
COLLAGEN MEMBRANE

CE

Manufactured by MedPark

RESORBABLE COLLAGEN MEMBRANE

Absorbent collagen membrane with Medpark's crosslinking technology

Biocompatibility

- Using type I bovine collagen through standardized refining process
- Biocompatibility improvement of crosslinking technology ensures safety without inflammatory reactions

Stable decomposition period

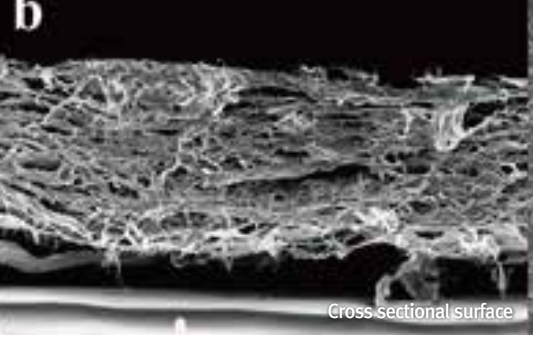
- Ensured biodegradation period through application of CE certified quality management standard
- Colla can stand in the body for at least 4 months

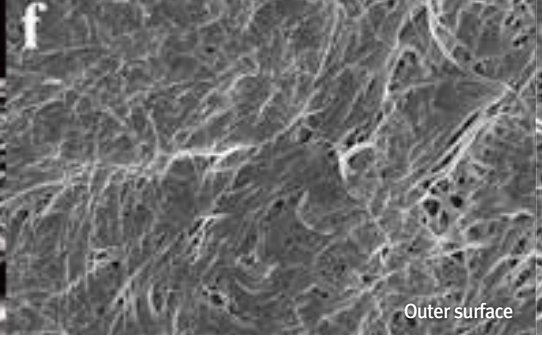
High Wetability

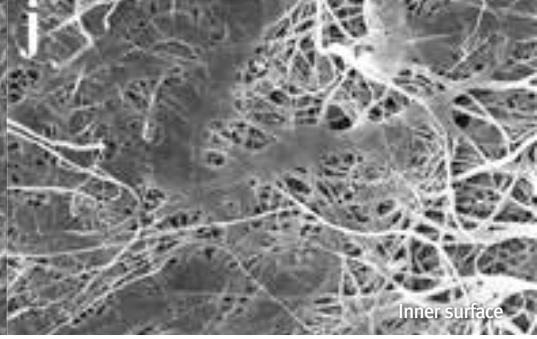
- Reduced hydration time due to improved hydrophilicity
- Excellent adhesion and easy manipulation

Sepcifications

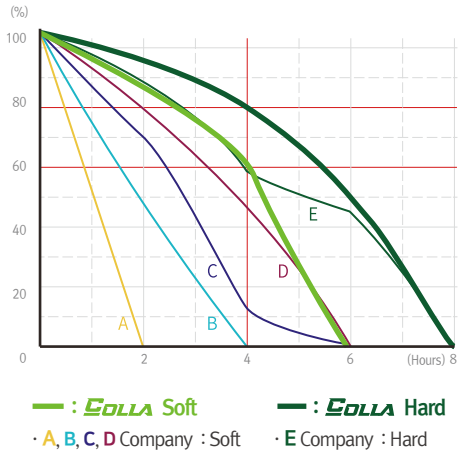
Material	Type	Feature	Size (mm)
Bovine	Soft	Excellent adhesion handling facilitated	10 X 20
			15 X 20
	Hard	Multilayer Structure Excellent Tension	20 X 30
			30 X 40







Excellent initial shape retention



Collagenase Degradation Test

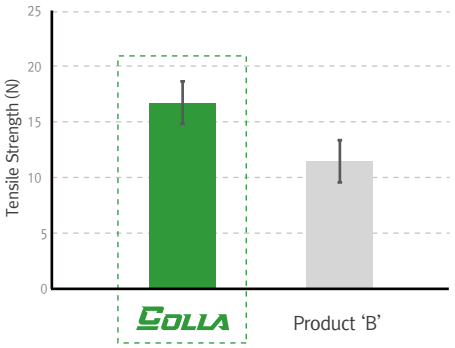
COLLA	Soft Type	Hard Type
Degradation time	6 hours	8 hours
Shape	Maintaining 60% of its shape up to 4 hours	Maintaining 80% of its shape up to 4 hours

Collagenase?

Enzymes that break down the peptide bonds in collagen

· Better initial shape maintenance than other membranes

IN VITRO Test



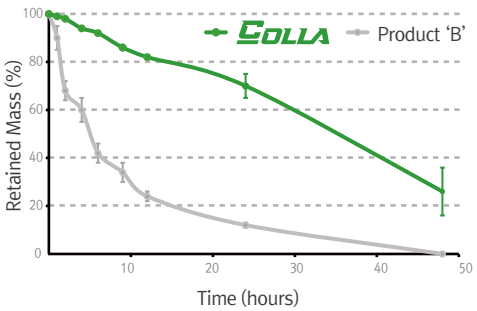
Tensile strength of membranes in wet state (unit:N) (n=5)

Mechanical test (Tensile strength)

Improving a manipulability and ensuring a stability for external stress

· Tensile strength (tearing resistance) in hydration is higher than other products

· Securing the initial osteoblast proliferation by its stability



Tensile strength of membranes in wet state (unit:N) (n=5)

Degradation test (Collagenase)

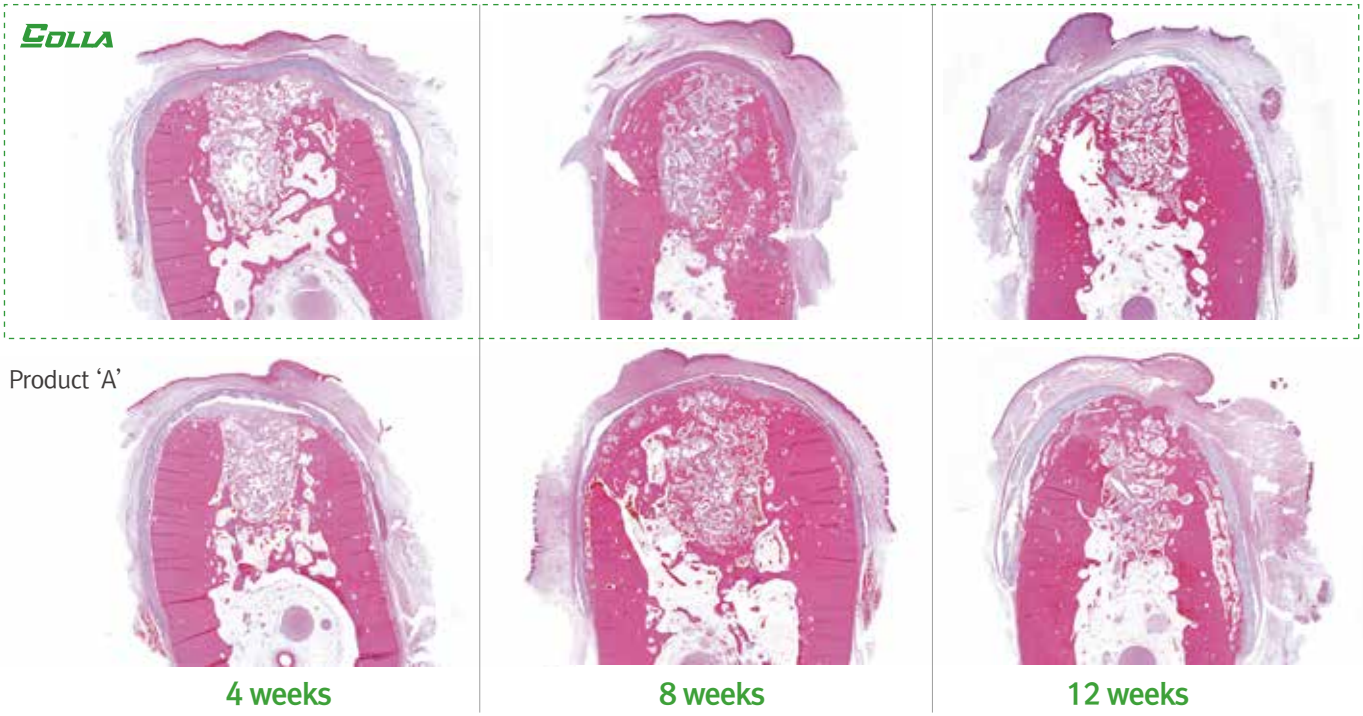
Improved resistance to decomposition as structural stability is achieved by enhanced interaction between collagen molecules

· High resistance to the enzyme action of macrophage

· Helping effective new bone formation by its shape maintenance and high resistance to enzyme decomposition

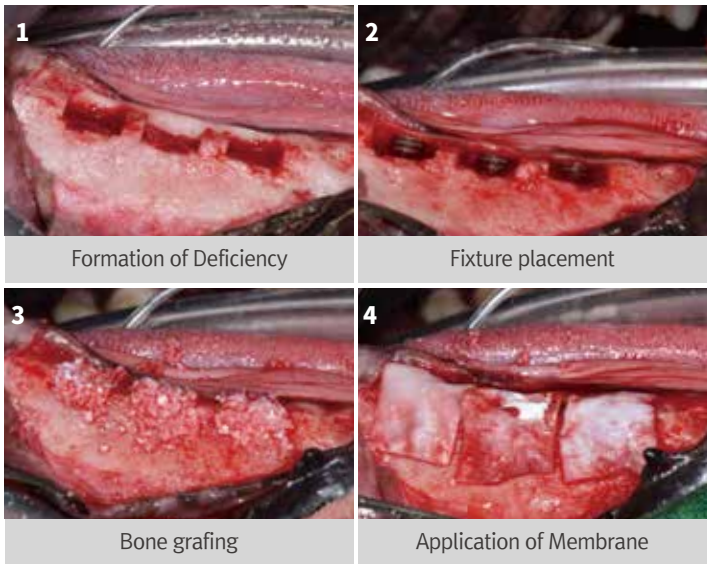
Preclinical case

Evaluation of histologic bone formation stability (H&E) : Large Animal (Beagle)



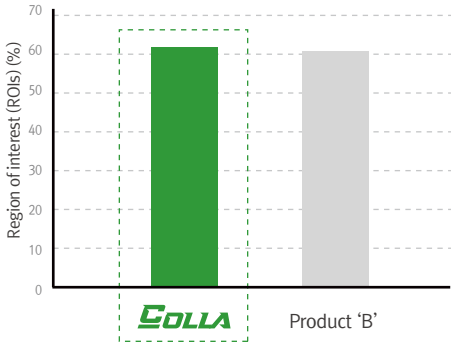
· **COLLA prevents loss of the bone graft materials,** and that the shape and thickness remain constant over time, thus **ensuring stable new bone formation**

New bone formation test (Micro CT) : Large Animal (Beagle)



Formation of Deficiency | Fixture placement

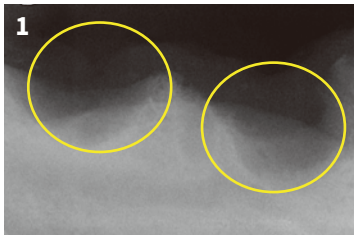
Bone grafing | Application of Membrane



Bone volume analysis within regions of interest (ROIs)(%)

[Bone volume analysis result using Micro CT]

Clinical case



1. Preoperative X-ray



2. Flap incision



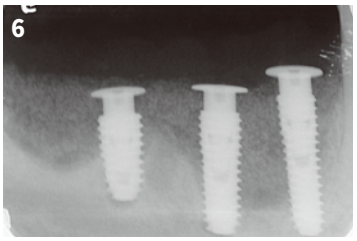
3. Implant installation



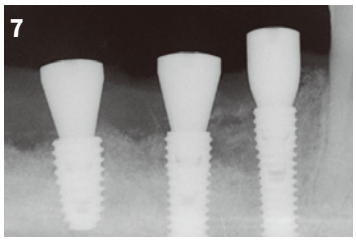
4. S1 bone graft



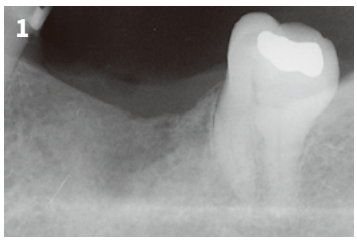
5. Application of COLLA



6. After the surgery



7. 4 months after Implant placement,
X-ray After 2nd stage surgery



1. Preoperative X-ray



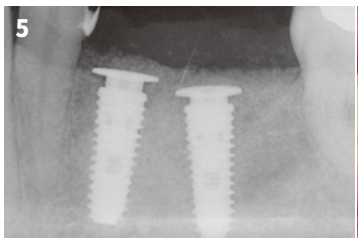
2. Incision of the affected part



3. Application of BOSS



4. Application of COLLA



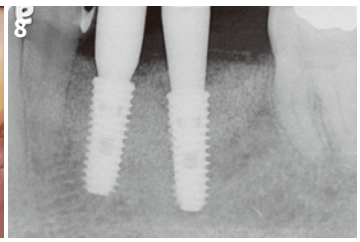
5. Postoperative X-ray



6. Healing period,
after 3 months of surgery
(Detection of keratinized tissues)



7. 2nd surgery after 3 months



8. Postoperative X-ray,
after 2nd surgery

Indication

- Periodontal/Infra bony defects
- Ridge augmentation
- Extraction sites
- Guided bone regeneration (GBR) procedures
- Sinus lifts

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