NEOVEIL

Neoveil Sheet

Mechanism and Composition

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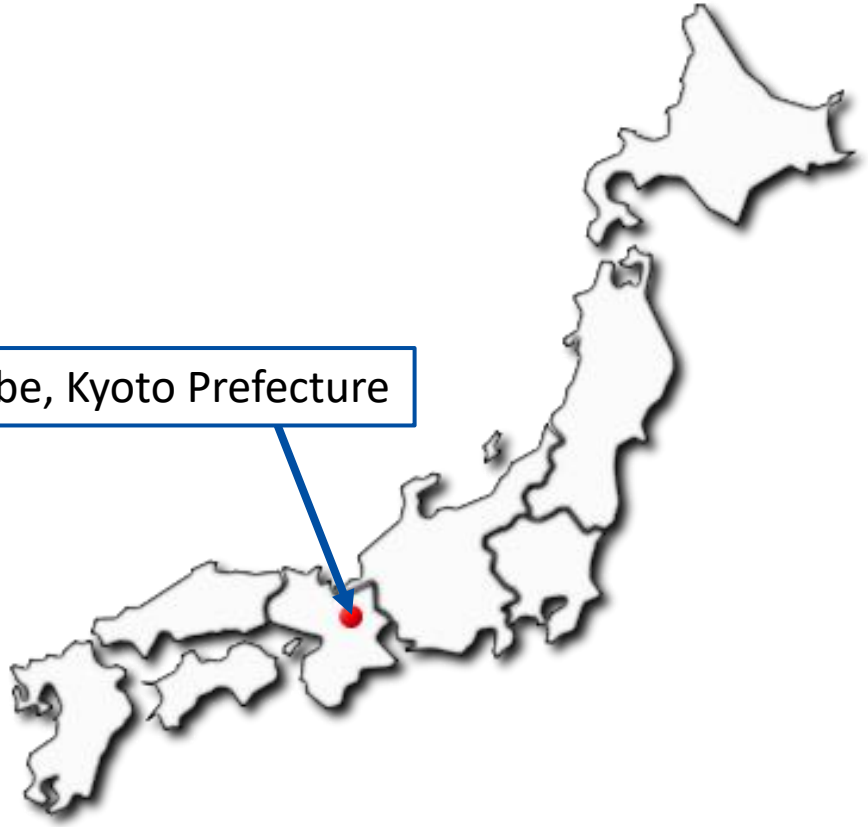
Manufacturing of Neoveil

Gunze Medical, Kyoto, Japan

- Products manufactured in the Ayabe Factory in Kyoto
- Specialized in bioabsorbable implants



Composition with 100% PGA

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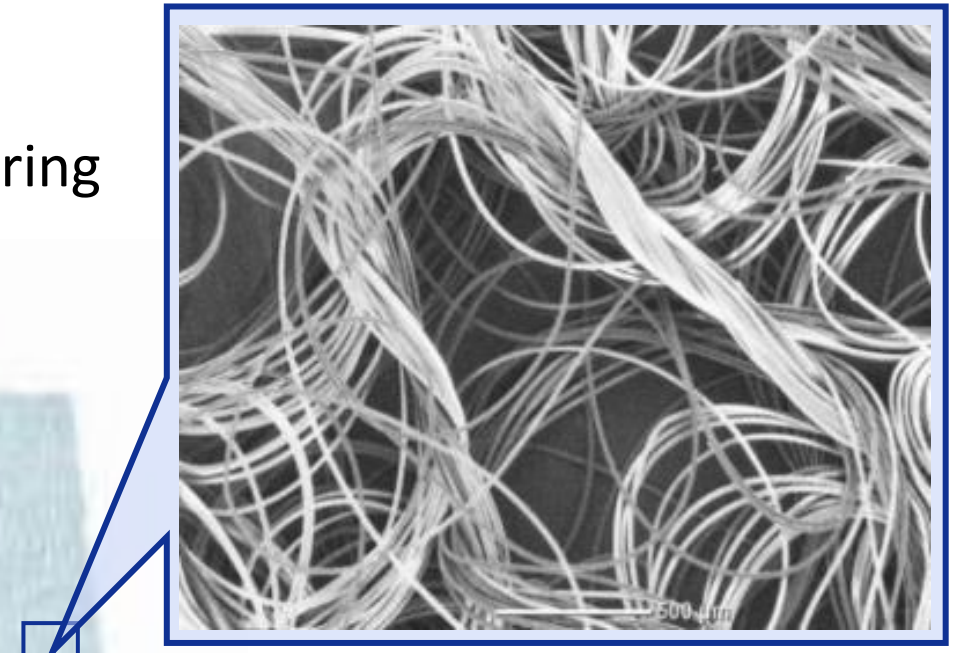
- Fibers made from 100% polyglycolic acid
- Very small amount of Solvent Green for coloring



Diameter of fibers: 15µm
Distance btw fibers: 56µm
Distance btw fiber bundles: 800µm
*Fibroblasts: 10~20µm

Stretchability to follow tissue movement

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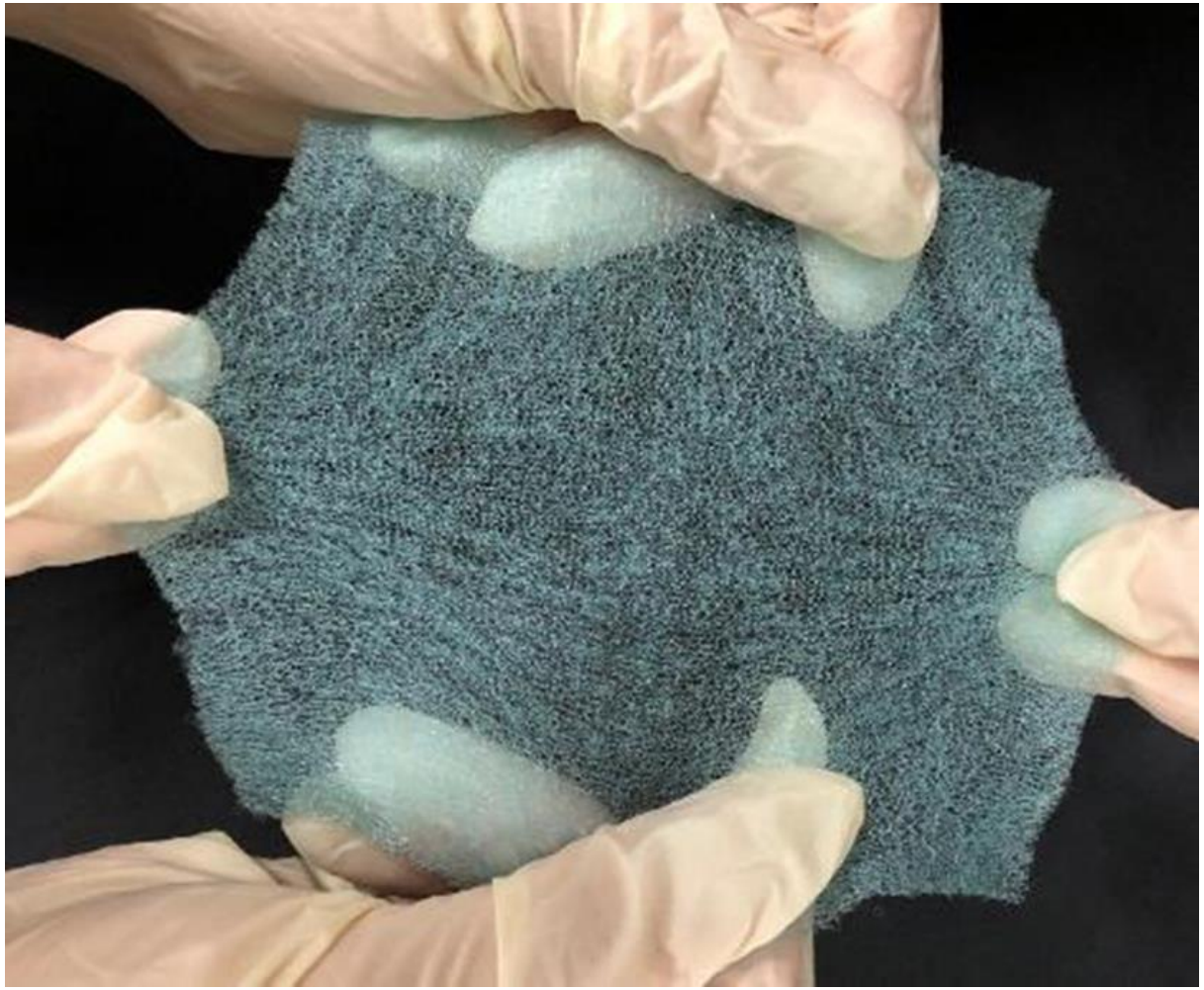
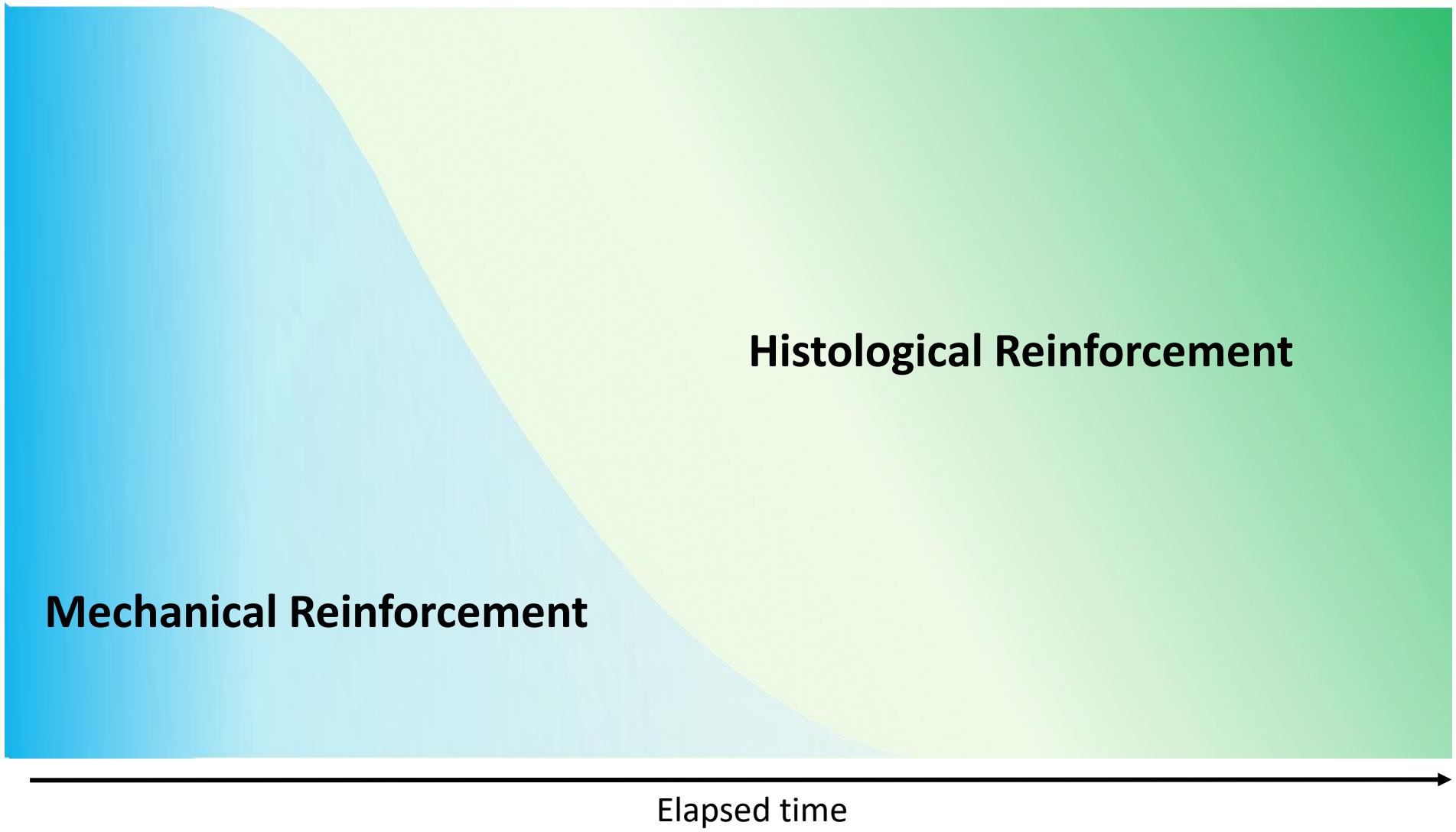
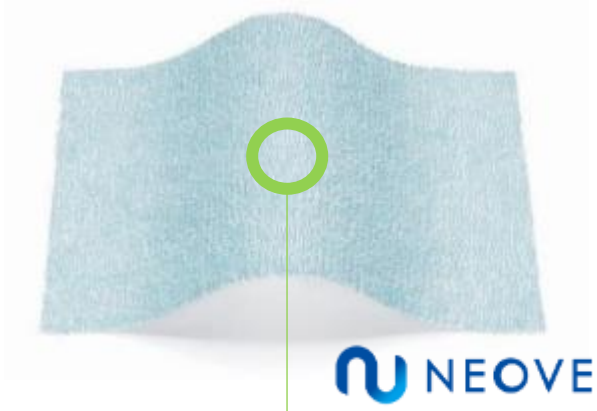


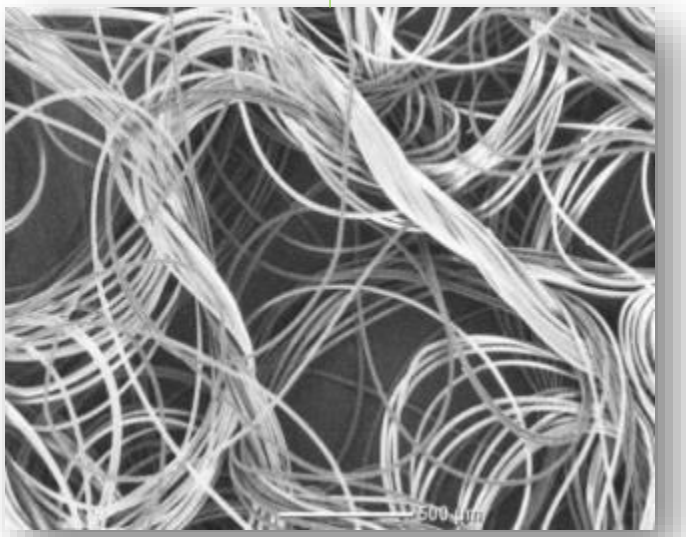
- manufactured using GUNZE's proprietary fiber processing technology
- unique fiber structure provides superior functionality
  - elasticity that responds to the movement of organs
  - affixing sensation that conforms flexibly to the tissues
  - unique features as a scaffold material for tissue regeneration at the defect site

Two mechanisms of Neoveil

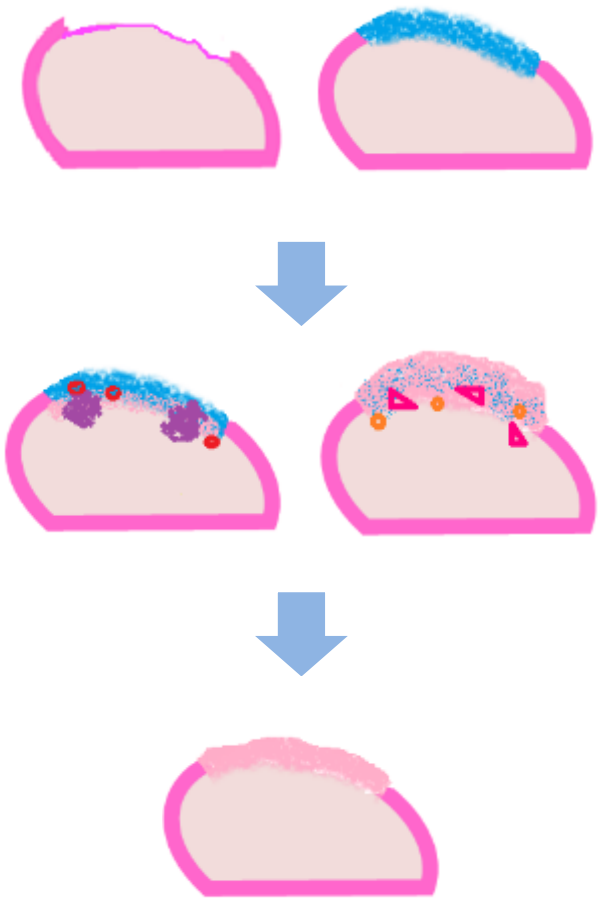


Principles of Tissue Reinforcement





Electron Microscope Image (x50)

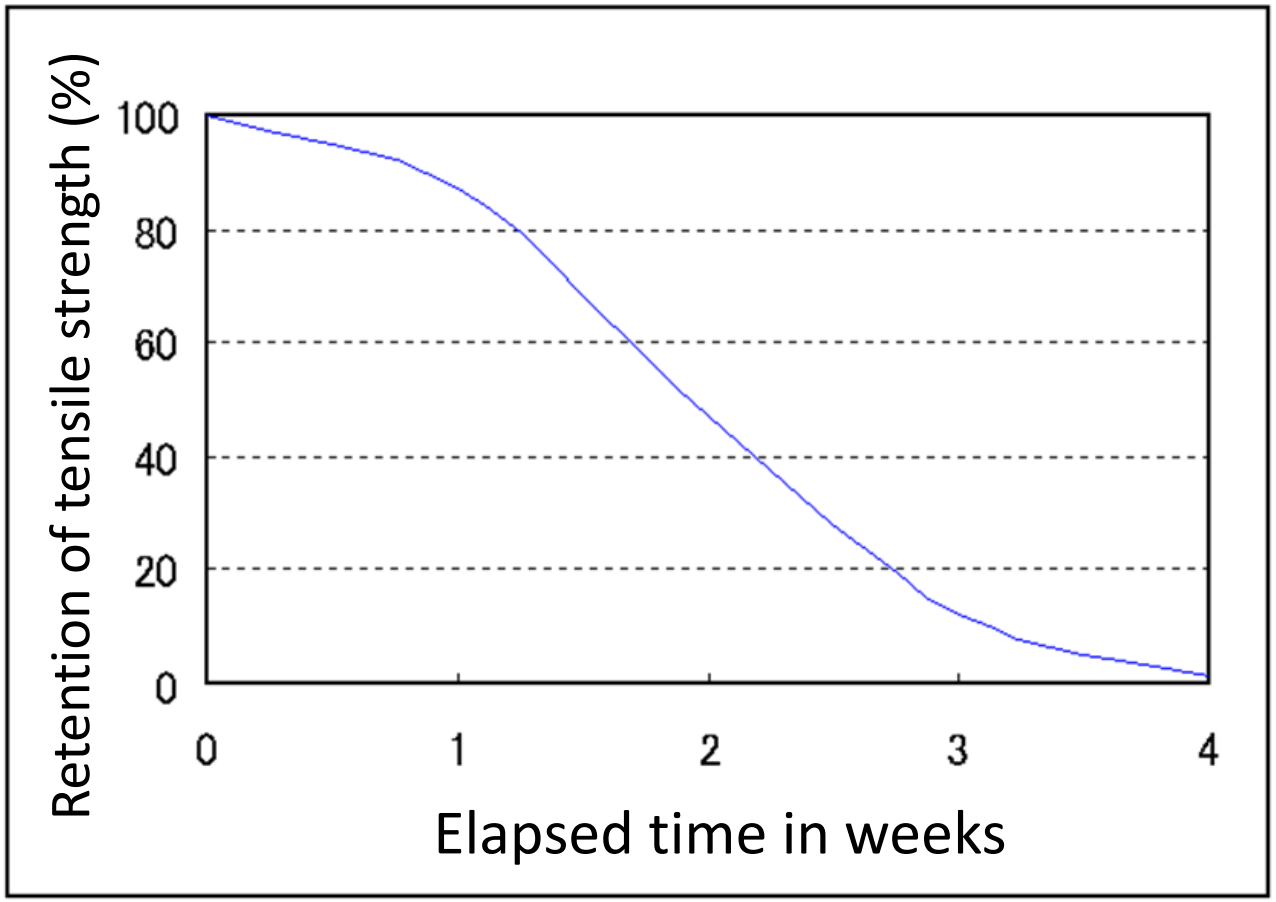


1. Fixation of product

2. Inflammatory cells infiltrate between the fibers of the product as a biological reaction, and granulation tissue forms using the fibers as a scaffold

3. As the product degrades, it is replaced by autologous tissue, tissue is reinforced by thickening

Retention of tensile strength



- Tensile strength decreases to around 50% after two weeks
- After four weeks: Tensile strength decreased to around 3%

Degradation and absorption process

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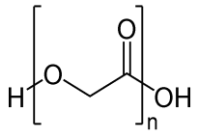
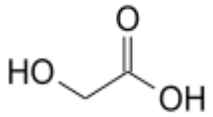
Absorption mechanism of polyglycolic acid



PGA（Polyglycolic acid）

↓ Hydrolysis



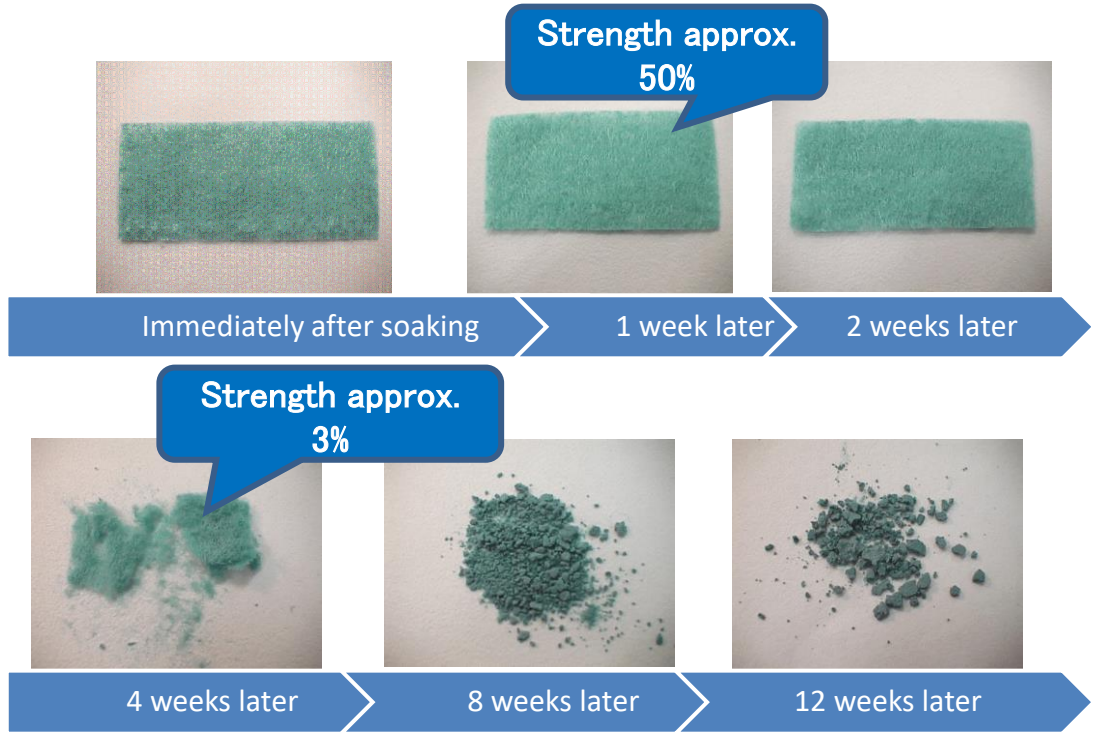
GA（Glycolic acid）

↓ Metabolization

H_2O + CO_2

Excretion from the body

Changes due to hydrolysis（immersion in 37℃ saline）



Full absorption in around 15 weeks

Degradation mechanism of PGA in the body

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Degradation processes of PGA in vivo