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WORLD 1st IMPLANT

by femto-second laser surface treatment



01 NON-TOXIC, ECO-FRIEND LEAF-LIKE IMPLANTS

This is an **acid-free implant** that doesn't use chemical surfacetreatment processes (toxic substances: sulfuric acid, hydrochloric acid). Instead, it employs an **eco-friendly physical surface treatment** process using femtosecond laser surface treatment technology.

I FEMTOSECOND LASER

- A laser with ultrashort pulses in femtoseconds (10^{-15} sec.)
- Utilizes unique nonlinear phenomena of femtosecond lasers, resulting in almost no direct impact during implant processing.
- Capable of high-quality micro-patterning surface treatments using non-thermal etching.

02 STRONG, WOOD-LIKE IMPLANTS

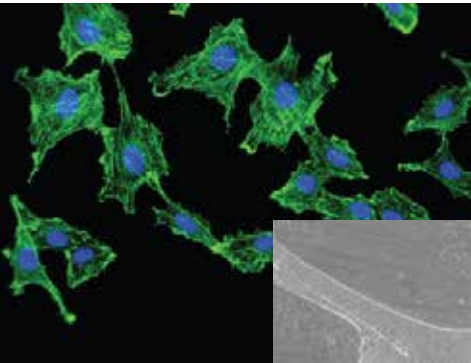
These implants use **high-strength titanium (Ti-6Al-4V ELI, Grade 23)**, which is also used in orthopedics for its durability against tearing and bending, resulting in stronger implants.

The femtosecond laser surface treatment technology from B2LAB can uniformly treat surfaces of both pure titanium and titanium alloys.

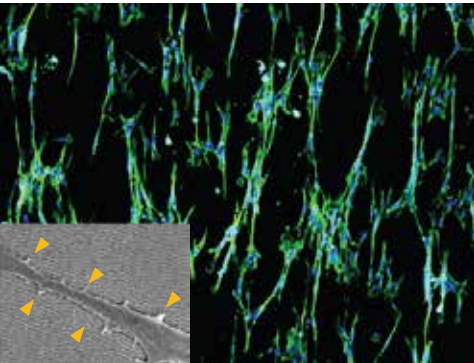
03 RAPID OSSEOINTEGRAION, SIMILAR TO TREE ROOTS TAKING HOLD

LASERO's **Wave-forming Nanotexture technology** promotes rapid osseointegration by **mechano-transduction** regulating microtubules within cells and deforming the shape of cell nuclei, thereby enhancing implant attachment.

GENERAL IMPLANTS



B2LAB LASERO

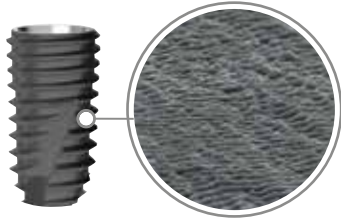


(ILLUSTRATION: BLUE FOR CELL NUCLEI, GREEN FOR FIBROUS ACTIN, AND YELLOW MARKERS FOR NANOPODIA)

B2LAB LINE UP

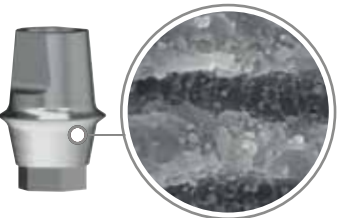
LASERO (Osseointegration)

The world's first Osseointegration-enhancing implant fixture using Wave-forming Nanotexture technology applied through femtosecond laser. (KFDA approval in August 2023)



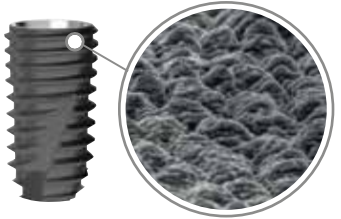
LASERT (Soft-Tissue integration)

Implant abutment designed for gingival attachment with a custom pattern for periodontal fibroblasts, improving bond strength to the gingiva. (upcoming release)



LASERAB (Anti-Bacterial)

Antibacterial implant fixtures featuring micro-patterns mimicking natural ecosystems' antibacterial surfaces, capable of directly destroying bacteria. (upcoming release)



PATENTS

Laser Surface Treatment Method and Apparatus Thereof (KR 10-2563889)
Patent application: Surface-treated Implant Structure
Korea, U.S., Europe, China, Brazil, India, Saudi Arabia, Philippines, Vietnam, Thailand, Indonesia, Malaysia.

