

SmartBone®

The next frontier of bone regeneration

SmartBone® is a bone substitute produced by the swiss company IBI (Industrie Biomediche Insubri) SA.

IBI SA is a company established in 2008 in Ticino (Switzerland) by a group of specialized researchers with strong competencies and core skills in processing materials for biomedical applications. IBI's specialists had been working for four years on a product capable to represent the future for health.

The company focus is on research, development and production of medical devices for tissue engineering and regenerative medicine: substitutes, grafts, 3D matrixes and 2D scaffolds. IBI SA pays extreme attention to safety and quality, for this reason is ISO13485 certified.

In 2012, SmartBone® entered the market by confirming itself as an innovative composite biomaterial developed for bone regeneration in reconstructive surgeries.

SmartBone® is available in different shapes from blocks to microchips. It is produced by combining:

- Spongy bovine mineral matrix
- Resorbable biopolymers
- Proteins

Thanks to its composition, SmartBone® can hence be categorized as a composite xeno-synthetic graft.

This hybrid composition guarantees exceptional biomechanical properties and promotes osteogenic process to obtain optimal and fast osteointegration. After grafting, SmartBone® is totally resorbed and replaced by patient's own bone once remodelling process is completed. SmartBone® blocks have impressive mechanical performances:

- Withstand heavy surgical manoeuvres;
- Allow very precision shaping with any type of surgical tools;
- Have high loading resistance;
- Offer high tenacity to screws fixation and have high volumetric stability.

Its 27% open-porous microstructure mimics the human bone ones and promotes the patient's cells to efficiently colonize and to quickly grow into SmartBone®, while its biopolymers degrade, providing a perfect integration and osteoconduction. SmartBone® microchips can be easily mixed with patient blood to obtain a paste capable of being shaped for a better site filling.

SmartBone® was designed to reduce the inner variability that many other bone substitutes have, due to their natural origin.





Industrie Biomediche Insubri SA provides also another service, according to the 93/42/CEE Legislation regarding custom-made medical devices, the so-called SmartBone® On Demand™.

SmartBone® on Demand™ is the custom-made bone grafts line, designed specifically for the needs of each patient, especially developed to manage complex cases. The perfect contact between the graft and the recipient site improves the integration: it allows a correct application of guided surgery techniques and lets to reduce surgery time, difficulty and risks.

Thanks to the high performances, the high workability, the resistance and the shape retention of SmartBone®, IBI SA can produce custom-made bone grafts for patient's specific defects.

4 steps to get your custom-made graft:

1. Take a CT Scan of the Patient concentrating on the defect.
2. Send the CT Scan in a DICOM format to IBI-SA with a brief clinical description.

IBI's trained Engineers will get in contact with you, discuss the plan and You will receive a commercial offer for your plan.

3. IBI's trained Engineers, in conformity with your indications and suggestions, will design the graft until you are satisfied from the design.
4. 3 weeks later you will receive your graft ready for the surgical intervention. No sterilization or extra shaping required.

SmartBone® On Demand™ guarantees your success:

- Custom-made to the specific needs of each of your patients;
- Ensures a perfect contact between the graft and the recipient site for improved integration;
- Ensures a precise creation of the desired shape, specifically designed for every kind of surgery;
- Helps you to resolve complex situations;
- Saves your time during surgery;
- Reduces your patient's risks;
- Helps you to reduce surgical costs;

www.ibi-sa.com // info@ibi-sa.com

