SUNSTAR
GUIDOR®

easy-graft®
CLASSIC

Together with leading dentists of the University of Zurich and experts in the field of biomaterials at ETH Zurich, we started in 1999 to develop a new therapy with the aim to prevent the atrophy of the alveolar crest after tooth extraction.

First, we developed a phase-pure ß-tricalcium phosphate (ß-TCP) granulate for bone defect filling: calc-i-oss.
Its high interconnected porosity, superior purity and histological results prove that complete resorption is valued by users.

Thereafter, we succeeded in coating the granules with a micrometer thick layer of polylactic acid. This allows the user to glue the granules together. Thus, our product RootReplica was born. This exact copy of the extracted tooth root made from a resorbable bone graft stops post extraction bleeding, prevents the loss of the coagulum and maintains the alveolar ridge in both height and width. This therapy creates the optimal condition for any subsequent prosthetic treatment.



Our newest achievement is the development of our "BioLinker®" – an activator which transforms the coated granules into a sticky mass and thus allows the bone graft to be applied directly from its syringe to the defect. In contact with blood the biomaterial solidifies and forms a defect-analog, mechanically stable, but porous solid body, which will be replaced over time with bone tissue. We call our product *easy-graft*: there is no "easier" way to fill bone defects.

easy-graft is based upon our long term experience in developing bone graft materials. It allows the user to treat bone defects in periodontology, oral surgery, implantology and after tooth extraction in the most simple and fastest way imaginable. Just try it out!

I hope I was able to spark your interest in our biomaterials. Thank you for your trust in our products.

Faithfully yours,





Dr. Kurt Ruffieux
CEO Degradable Solutions AG



The innovative concept

Soft from the syringe – outstanding handling
easy-graft®CLASSIC is mouldable and can be applied directly from the syringe into the bone defect.

Hard in the defect
In contact with blood, *easy-graft®CLASSIC* hardens within minutes into a stable scaffold of interconnected granules.

Membrane-free techniques
A membrane to retain the *easy-graft®CLASSIC* scaffold in the defect is often not required, saving time and costs.

Space for regeneration
easy-graft®CLASSIC features a total porosity of approximately 70%. Macropores provide space for vascularization and bone regeneration. The open micropores allow for optimal fluid circulation.

Replaced by bone
easy-graft®CLASSIC serves as an osteoconductive scaffold for bone deposition. Material resorption and bone regeneration proceed in parallel. *easy-graft®CLASSIC* is fully resorbed within 5 to 15 months. No foreign material remains in the body.

100% synthetic
easy-graft®CLASSIC is fully synthetic and does not contain substances of animal or human origin.

Proven and tested biomaterials
easy-graft®CLASSIC is composed of phase-pure ß-tricalcium phosphate. The granules are coated with a micrometer thin film of a biodegradable polymer.







Socket preservation

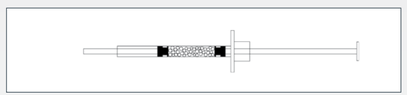


- **Clean defect using indication – specific standard procedure**
- **Inject *easy-graft®CLASSIC* from the syringe into the defect**
- **Mould the sticky granules to fill the defect with a condenser**
- **Excess granules may be removed easily with a scaler**
- **Suture the wound as well as the indication allows**



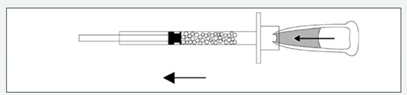
Step by step...

Open the pouch with the syringe containing *easy-graft®CLASSIC* granules, open the pouch with the BioLinker®.

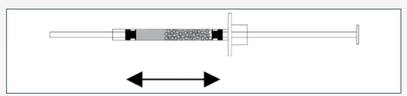


Fill the BioLinker® into the syringe.

Mix both components and discard excess BioLinker®.



The granules are now sticky and may be applied directly into the bone defect.



Supporting literature

Reichhardt, D. et al. 2006. Injectable and PLGA coated ß-TCP granules hardening in situ: an in vitro study. Swiss Conference on Biomaterials, May 10th. - Thoma, K. et al. 2006. Bioabsorbable root analogue for closure of oroantral communications: A prospective case report. Oral Surg Oral Med Oral Pathol Oral Radiol Endod, in press. - Nair, R. et al. 2006. Biocompatibility of ß-Tricalcium Phosphate Root Replicas in Porcine Tooth Extraction Sockets – A Correlative Histological, Ultrastructural, and X-ray Microanalytical Pilot Study. Biomaterials Applications, 0: 1-18, Jan 27.- Nair, R. et al. 2004. Observations on healing of human tooth extraction sockets implanted with bioabsorbable polylactic-polyglycolic acids (PLGA) copolymer root replicas: A clinical, radiographic and histological follow-up report of 8 cases. Oral Surg Oral Med Oral Pathol Oral Radiol Endod, 97: 559-69, May. - Nair, R. et al. 2004. ß-TCP/PLGA open porous scaffolds for the prevention of alveolar bone loss after tooth extraction: Evaluation in a mini-pig model. World Biomaterials Congress, May 17-21. - Maspero, FA, Ruffieux, K. 2004. ß-TCP/PLGA open porous scaffolds for the prevention of alveolar bone loss after tooth extraction: scaffold characterization and in vitro degradation behaviour. World Biomaterials Congress, May 17-21. - Reichhardt, D., Ruffieux, K. 2004. Supporting Literature and References for calc-i-oss and calc-i-oss Ortho. TM-056, Dec 14. - Schmidlin, P. et al. 2004. Alveolarkammprävention nach Zahnextraktion – eine Literaturübersicht, Schweiz Monatsschr Zahnmed, 114: 328-336, April. Schugg, J. et al. 2002. Prävention der Alveolarkammatrophie nach Zahnextraktion durch Wurzelreplikas. DZW, 47: 14-15, Feb. - Maspero, FA et al. 2002. Resorbable defect analog PLGA scaffolds using C02 as solvent: Structural characterization, J Biomed Mater Res, 62: 89-98. - Heidemann, W. et al. 2001. Degradation of poly(D,L)lactide implants with or without addition of calciumphosphates in vivo. Biomaterials, 22: 2371-2381. - Maspero, FA et al. 1999. Comparisons of the Degradation Behavior of two Open Porous PLGA-Scaffolds, Tissue Engineering Congress. - Suhonen, J., Meyer, B. 1996. Polylactic acid (PLA) root replica in ridge maintenance after loss of a vertically fractured incisor. Endod Dent Traumatol, 12: 155-160. - Suhonen, J. et al. 1995. Custom made Polyglycolic acid (PGA)-root replicas placed in extraction sockets of rabbits. Dt. Z Mund Kiefer Gesichts Chir. 19: 253-257.

Simplify your therapy

Straight from the syringe into the defect

easy-graft®CLASSIC is the first biomaterial applied straight from the syringe into the defect where it subsequently hardens and creates a porous but stable scaffold. During the application the granules stick together and stay at the defect site.

easy-graft®CLASSIC is 100 % synthetic, completely resorbable and replaced by autologeous bone tissue within months.

easy-graft®CLASSIC is intended for use for all dental indications where bone graft substitutes are needed.











benefits in periodontology

- **easy modelling in the pocket**
- **the sticky granules stay in the defect**
- **in situ hardening**

Our Products

Product	*easy-graft®CLASSIC*					
Reference no.	C11-012	C11-013	C11-072	C11-073	C11-002	C11-003
Units	3 x 0.15 ml	6 x 0.15 ml	3 x 0.25 ml	6 x 0.25 ml	3 x 0.4 ml	6 x 0.4 ml
Granule size	500–630 µm	500–630 µm	500–1'000 µm	500–1'000 µm	500–1'000 µm	500–1'000 µm
Material	Phase-pure ß-tricalcium phosphate (> 99 %)					



Product	*easy-graft®CRYSTAL*					
Reference no.	C15-012	C15-013	C15-072	C15-073	C15-002	C15-003
Units	3 x 0.15 ml	6 x 0.15 ml	3 x 0.25 ml	6 x 0.25 ml	3 x 0.4 ml	6 x 0.4 ml
Granule size	450–630 µm	450–630 µm	450–1'000 µm	450–1'000 µm	450–1'000 µm	450–1'000 µm
Material	Biphasic calcium phosphate (60 % hydroxyapatite / 40 % ß-TCP)					



Product	*calc-i-oss™CLASSIC*		
Reference no.	A02-103B	A02-103C	A02-103D
Units	3 x 0.5 ml	3 x 1.0 ml	3 x 2.0 ml
Granule size	315–500 µm	500–1'000 µm	1'000–1'600 µm
Material	Phase-pure ß-tricalcium phosphate (> 99 %)		



Product	*calc-i-oss™CRYSTAL*	
Reference no.	A09-211	A09-231
Units	3 x 1.0 ml	3 x 2.5 ml
Granule size	450–1000 µm	450–1000 µm
Material	Biphasic calcium phosphate (60 % hydroxyapatite / 40 % ß-TCP)	



Manufacturer:

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SUNSTAR GUIDOR®

easy-graft®CLASSIC

soft from the syringe
mouldable in the defect
hardens in contact with blood
100% synthetic bone graft substitute
fully resorbable

