

	SIZES	QUANTITIES	PRODUCTS	REFERENCES
QUALIOS TCP	0.1 - 0.5mm	0.5g x 1 piece	QUALIOS TCP 0.1 - 0.5mm - 0.5g x 1	200240
		0.5g x 5 pieces	QUALIOS TCP 0.1 - 0.5mm - 0.5g x 5	200241
	0.5 - 1.0mm	1g x 1 piece	QUALIOS TCP 0.5 - 1.0mm - 1g x 1	200242
		1g x 5 pieces	QUALIOS TCP 0.5 - 1.0 mm - 1g x 5	200243
	6 x 10mm	Cylinders x2	QUALIOS TCP 6 x 15mm Cylinders x2	200244
QUALIOS BCP	0.1 - 0.5 mm	0.5g x 1 piece	QUALIOS BCP 0.1 - 0.5mm - 0.5g x 1	200245
		0.5 g x 5 pieces	QUALIOS BCP 0.1 - 0.5mm - 0.5g x 5	200246
	0.5 - 1.0 mm	1g x 1 piece	QUALIOS BCP 0.5 - 1.0 mm - 1g x 1	200247
		1g x 5 pieces	QUALIOS BCP 0.5 - 1.0 mm - 1g x 5	200248
	6 x 15 mm	Cylinders x2	QUALIOS BCP 6 x 15mm Cylinders x2	200249



I AM
STRONG

QUALIOS™

Unique structure
and high mechanical resistance
for optimal bone regeneration



X-Mind® trium, class IIb medical device (DNV - CE 0434). Manufacturer: DE GÖTZEN ACTEON Group (Italy). Piezotome®, class IIa medical device (LNE GMED CE 0459). Manufacturer: SATELEC® (France). Qualios TCP and Qualios BCP, class III medical device (SGS - CE 0120). Manufacturer: Medbone Medical Devices Ita (Portugal), Distributor: Produits Dentaires Pierre Rolland SAS (France). For professional dental use only. Read the instructions in the notice carefully. Creation date: January 2017

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IMPLANTOLOGY ACCORDING TO ACTEON

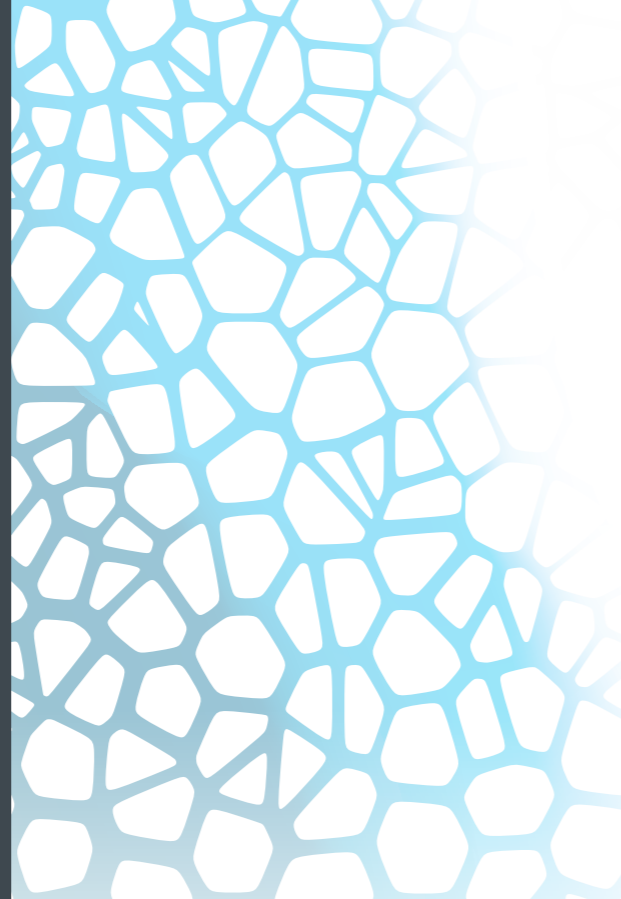
Operative safety for long-lasting surgery with peace of mind

The evolution of dental technology is such that we can now perform procedures which were unimaginable 10 years ago.

For example, in the field of implantology, the success rate for implant placements has progressed notably due to pre-implant procedures.

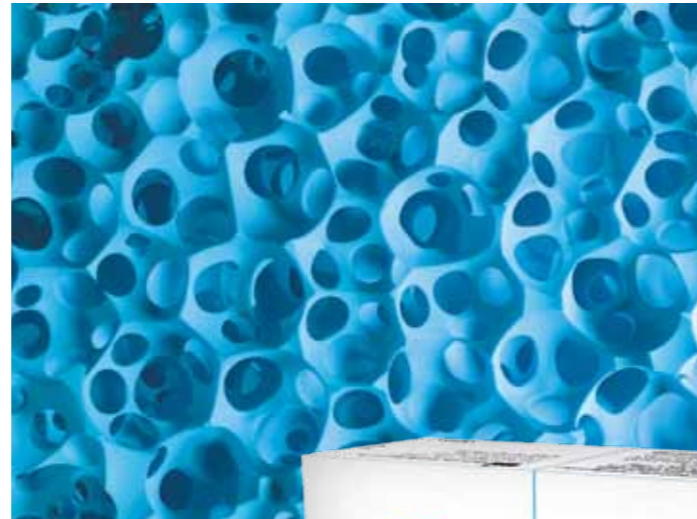
Although the implant is the key element in this revolution, it is essential also to have a high quality bone support. X-MIND TRIUM™ identifies this support and makes it possible to measure the volume immediately and assess the bone density. As dental gaps are sometimes old and associated with bone loss, a graft is often necessary to reconstruct the support which will receive the implant. As a result of its ultra-porous structure that is especially compression-resistant, the brand new synthetic filling material, QUALIOS™, is a support of choice for bone regeneration without any fear of the risk of contamination associated with products from animal origin. Pre-implant surgery involving bone grafting is performed on areas where the supporting bone is insufficient. The use of the powerful ultrasonics PIEZOTOME® is particularly safe and atraumatic. Its fine, precise cuts offer fast healing with a dramatic drop in post-operative pain.

All these ACTEON® innovations result from the research of 5 design offices which collaborate daily with international dental surgeons to offer patients faster, more natural results whilst minimising possible operative sequelae.

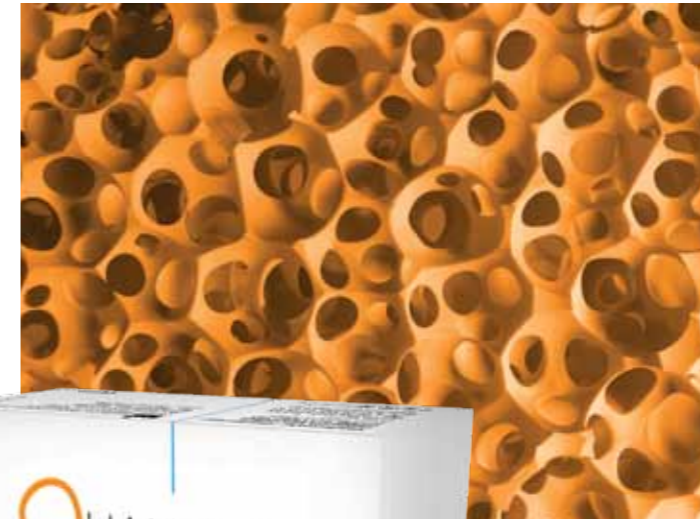


A NEW GENERATION OF SYNTHETIC BONE GRAFT MATERIAL

QUALIOS™
99.9% β-TCP



QUALIOS™
25% β-TCP+75% HAp



MORE INVENTIVE

Thanks to an exclusive synthesis process, Qualios has a unique structure with very large interconnected pores, particularly suitable to bone colonization. Qualios has 80% porosity and, despite this hyper porosity, has a high mechanical resistance⁽¹⁾.

LESS INVASIVE

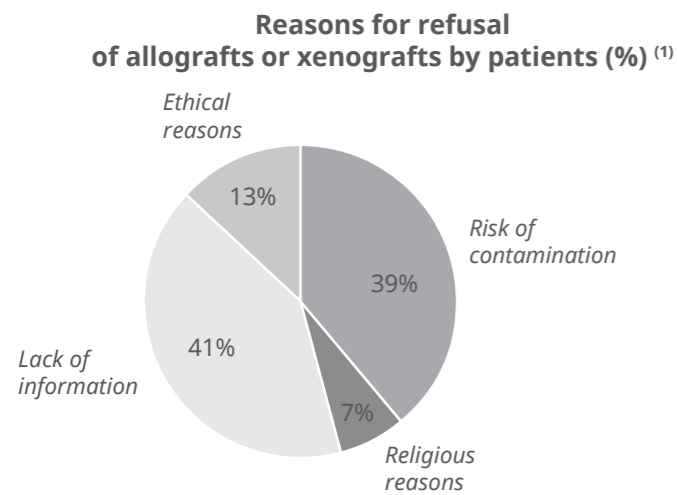
Qualios is a 100% synthetic material. It is free from any potential contamination associated with products from animal and human origin. The phosphocalcic ceramic is 100% resorbable and provides the mineral elements essential to high quality bone regeneration.

(1) Ranito C.M.S., et al. Hydroxyapatite foams for bone replacement. Key Engineering Materials 2005; 284-286:341-4

A BONE GRAFT MATERIAL WITH UNIQUE PROPERTIES

WHY A SYNTHETIC BIOMATERIAL?

Synthetic biomaterials are preferred by patients who are not comfortable with bone graft products from animal or human origin for various reasons ⁽¹⁾.



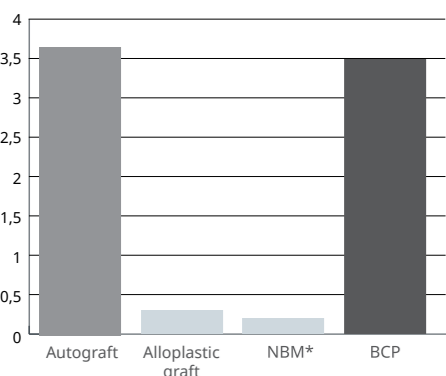
Among synthetic products, phosphocalcic ceramics have recently shown very interesting properties: **osteochonduction**, thanks to their porous structure, but also **osteoinduction**, as evidenced by this study ⁽²⁾. The BCP has shown a potential to induce the differentiation of stem cells into osteoblasts, as evidenced by these genetic markers:

UNIQUE STRUCTURE & INCREASED MECHANICAL STRENGTH

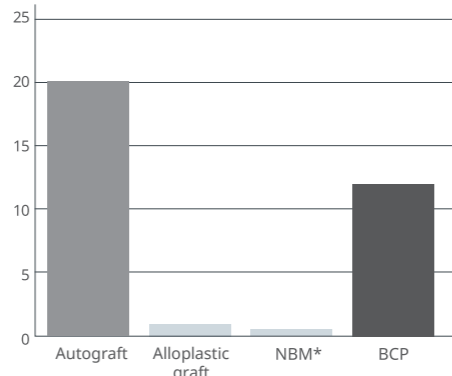
Main bone graft materials ⁽²⁾⁽³⁾

Materials	Type	Osteo-conduction	Osteo-induction
Allograft	FDBA**	●	
	DFDBA***	●	●
Xenograft	Biologic HAp (Bio-oss®)	●	
	Calcium Carbonate (coral)	●	
Synthetic (alloplastic material)	Synthetic HAp	●	
	TCP	●	
	HAp + TCP	●	●

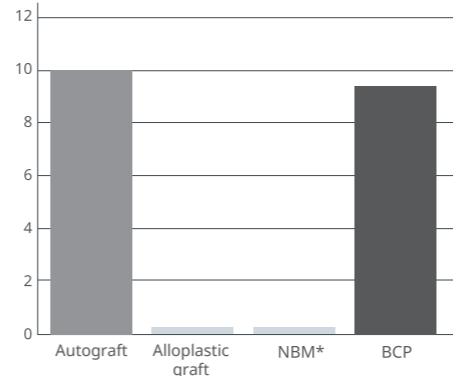
Relative expression of Runx2 gene (Mitochondrial RNA)



Relative expression of COL1 gene (Mitochondrial RNA)



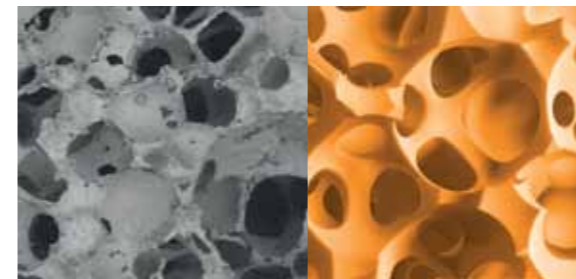
Relative expression of OC gene (Osteocalcine - mitochondrial RNA)



* Natural Bone Mineral (Bio-Oss®) - **Freeze-dried bone allograft - ***Deminerzalized freeze-dried bone allograft

Large interconnected pores to facilitate osteoconduction ⁽⁴⁾

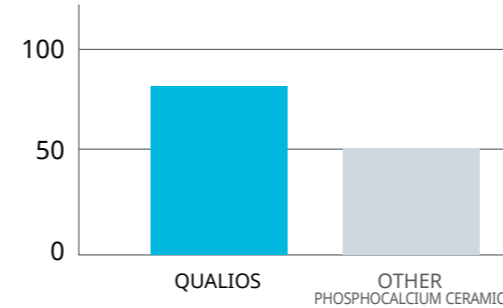
Thanks to its unique manufacturing process, from a foam of phosphocalcic derivatives, Qualios is characterized by an ultra-porous structure conducive to vascularization and bone colonization. The alveoli are all inter-communicating allowing bone cells to grow and proliferate within the structure ⁽⁴⁾.



MEB x201

3D representation

Porosity (%)



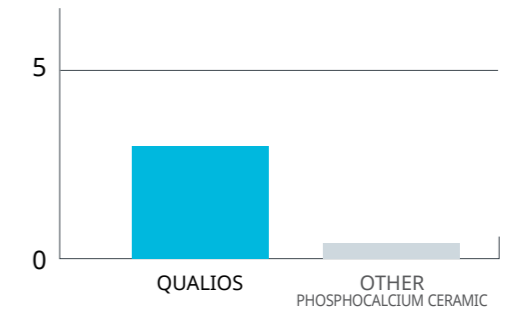
Resorbability

Qualios β -TCP is fully resorbable. It is replaced by new bone in 2-4 months depending on the implantation site. Qualios hydroxyapatite is also 100% resorbable, but its resorption is slower: 6 to 24 months on average. With Qualios TCP and Qualios BCP, it is thus possible to choose how long the filling material will occupy the space before being totally substituted by newly-formed bone.

Greater mechanical resistance ⁽⁴⁾

Qualios has a superior compression resistance thus, holding its volume while filling the space during the period of bone regeneration ⁽⁴⁾.

Compressive strength (MPa)



BONE COLONISATION IS EASIER FOR BETTER REGENERATION

Bioactivity

Qualios TCP and Qualios BCP are bioactive materials. When phosphocalcium ceramics is resorbed, calcium and phosphate are released and then used during osteogenesis ⁽⁵⁾.

(1) Reingewirtz H, et al. Choix d'un biomatériau de substitution osseuse par les patients. JPIO 2016 HS Biomatériaux d'aujourd'hui

(2) Miron R.J, et al. Osteoinductive potential of a novel biphasic calcium phosphate bone graft in comparison with autografts, xenografts, and DFDBA. Clin. Oral Impl. Res. 2015; 00:1-8

(3) Gatti C, et al. Intérêt des matériaux de substitution osseuse dans les traitements des lésions infra-osseuses. HS JPIO. 2016

(4) Ranito C.M.S, et al. Hydroxyapatite foams for bone replacement. Key Engineering Materials 2005; 284-286:341-4

(5) Jabr S. Al-Sanabani, et al. "Application of Calcium Phosphate Materials in Dentistry," International Journal of Biomaterials, vol. 2013, Article ID 876132, 12 pages, 2013. doi:10.1155/2013/876132

A SOLUTION FOR EACH PATIENT

QUALIOS™
99.9% β-TCP

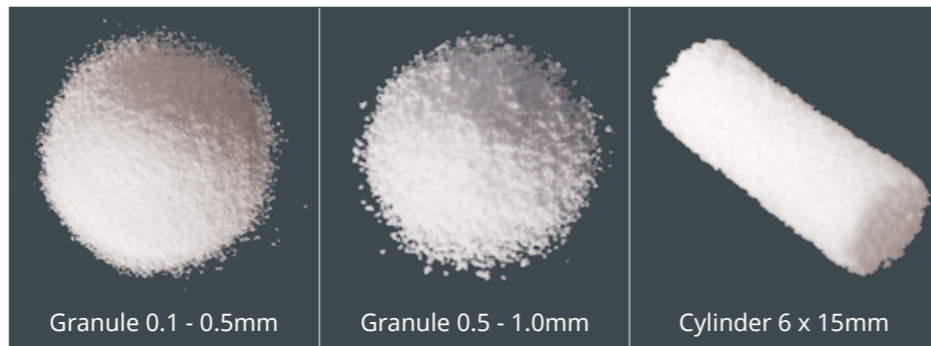


Fully resorbable
within 2 to 4 months

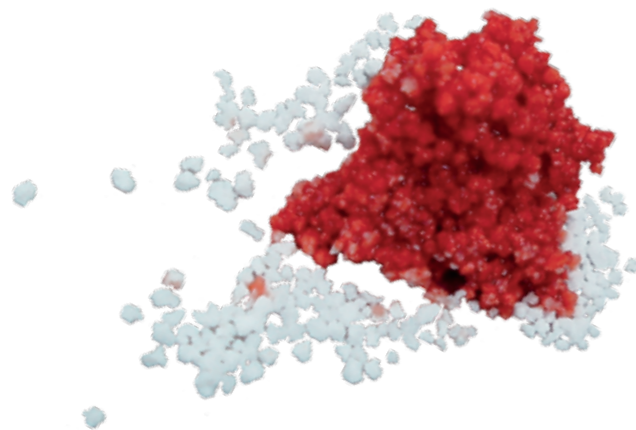
QUALIOS™
25% β-TCP+75% HAp



Fully resorbable
within 6 to 24 months



Periodontal and endodontic surgeries	Filling periodontal bone defects	●		
	Reconstruction of tumor voids and cysts defects		●	
Implant surgeries	Socket graft		●	●
	Sinus lift		●	



The high porosity of the material makes easier the absorption of fluids (blood, PRF, PRP...) to form a cohesive structure that is easy to handle.

CLINICAL CASE 1 · QUALIOS TCP

Root resorption on tooth 21, extraction, implant placement and control after 3 and 6 months.



Initial condition



Extraction, bone graft with TCP 0.5-1.0mm and implant placement at the same time



J0: Post-operative radiograph showing the immediate implant placement after bone grafting



J+3months: excellent bone formation around the implant replacing Qualios TCP



J+6 months: the condition is stable

With the kind authorization of Dr. Hiram FISCHER (Portugal).

CLINICAL CASE 2 · QUALIOS BCP

Sinus lift, implant placement and control after 12 months



J0: Initial X-ray image showing the extension of crestal defect



J0: control after sinus lift with Qualios BCP (0.5-1.0mm)



J+12 months: the implant is osteointegrated, the image evidenced the graft integration. Hydroxyapatite is still visible around the implant as it will need one more year to be fully resorbed.

With the kind authorization of Dr. Hiram FISCHER (Portugal).