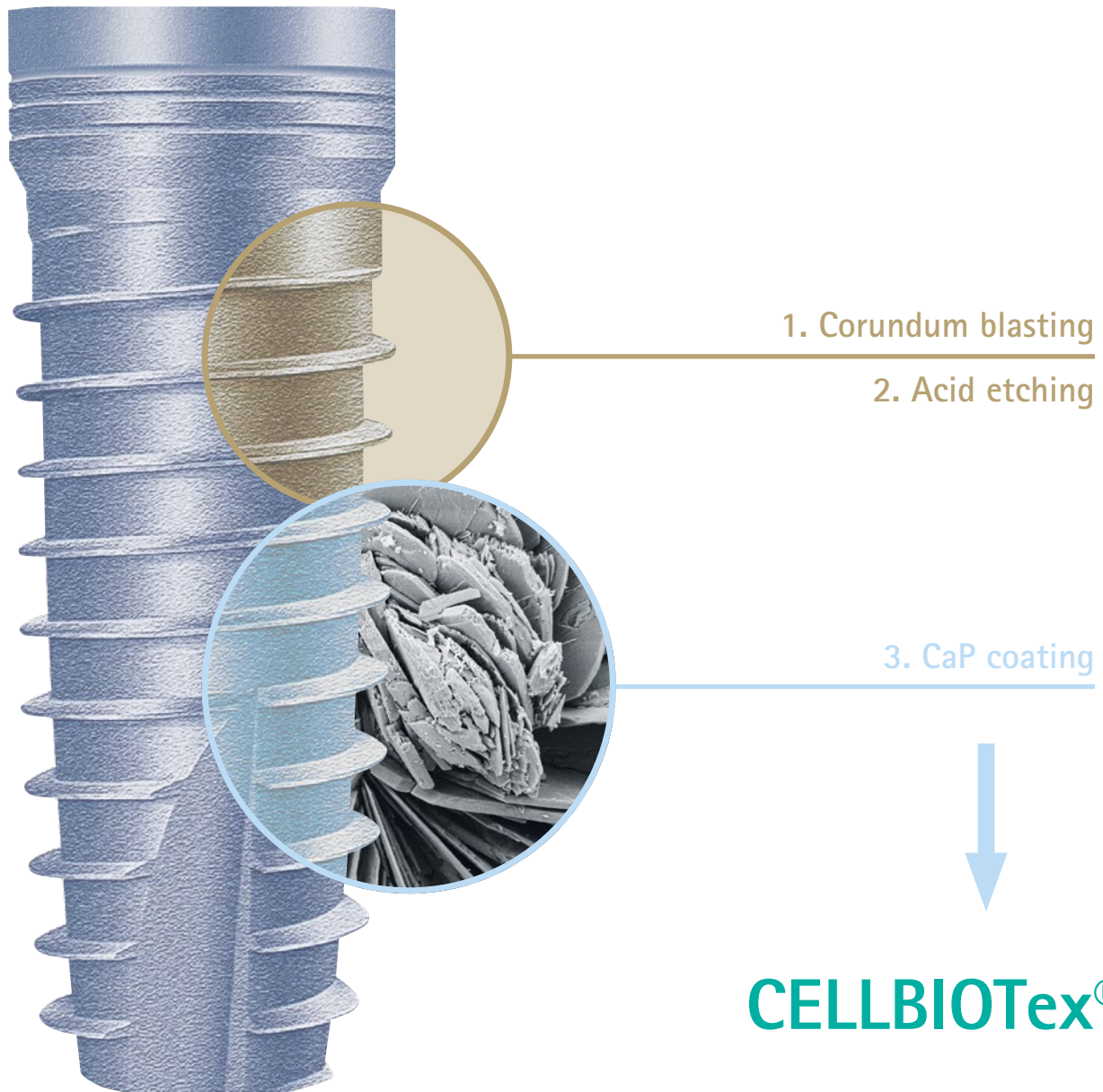


Our CELLBIOTex[®]-SURFACE for your IMPLANT



*CELLBIOTex[®]
Corundum-blasted, acid etched surface featuring
our bioactive calcium phosphate coating*

CELLBIOTex® Implant Surface

Successful osseointegration does not only depend on the design of a product and the selection of its materials. It is a process that is also significantly influenced by the properties of the implant surface which is an essential prerequisite for the long-term success of endosseous implants. The biological behaviour of the implant surface is defined by its topography and its chemical composition.*

*Literature on request

Description of the Surface

CELLBIOTex® is a combination of a subtractive and an additive surface treatment. The subtractive process is comprised of corundum blasting followed by acid etching to create an optimal surface topography. After the subtractive treatment is performed, a very thin layer of the calcium phosphate coating (BONIT®) is applied to the implant surface. BONIT® is a completely resorbable, thin, fine-crystalline and firmly adherent calcium phosphate coating. CELLBIOTex® is only offered for pure titanium implants.

Characterization of the Surface

Test criteria	Result
Color	Light gray
Layer thickness (BONIT® layer)	5 ± 3 µm
Bond strength (BONIT® layer) (ASTM F 1147-99)	≥ 15 MPa
Roughness R _a (after corundum blasting and acid etching)	R _a = 3.0 ± 1.5 µm
Phase composition of the BONIT® layer	≥ 70 % brushite / ≤ 30 % HA
Ca/P ratio of the applied BONIT® layer (EN ISO 11885-E22)	1.1 ± 0.1
Surface structure	Uniform surface texture
Durability	5 years
Solubility (based on the BONIT® content)	<ul style="list-style-type: none">• 18.3 % (after 7 days in physiological buffer solution [Gomori])• 31.4 % (after 7 days in physiological buffer solution [Ducheyne])
Analysis of raw materials	Raw materials are subject to the requirements of the U.S. standards ASTM F 1185 and ASTM F 1609.

Advantages of the Surface

- Microstructured surface topography with corundum blasting and acid etching
- Complex surface pattern/significant surface enlargement
- Hydrophilic surface/high affinity for blood
- Increased primary stability with shorter healing time
- Active support of bone deposition
- Greater osseoconductivity of the surface
- Highly biocompatible (BONIT® coating)

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