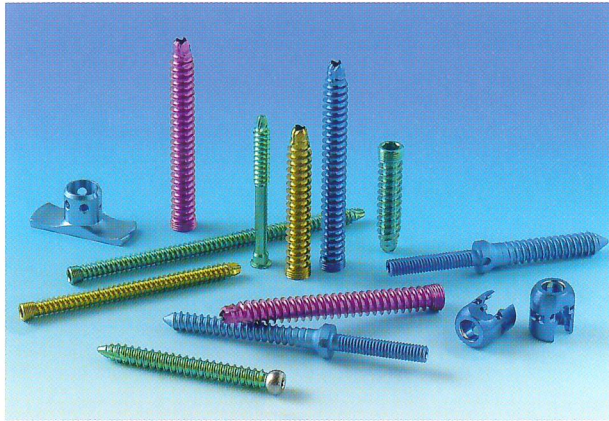


Biocoat™ – Coloured anodisation of titanium



Titanium implants and instruments processed with *Biocoat™*.

***Biocoat™* is a colouration process of titanium by anodisation.**

The coating is essentially made up of a titanium oxide TiO_2 whose thickness is very homogeneous all around the parts. The layer has a great adherence toward the substrate and is generated from a surface transformation during which titanium evolves from its metallic phase to the oxide one. The layer's thickness is adjusted by varying the process parameters in the range from 30 to 300 nm. The coating acts as an interferential filter and its colour is in this way directly related to its thickness. The later can be varied in a wide range of pleasant tones in a sequence following that of a rainbow. The colours are well constant and independent of the observation incidence.

Biocoat™ is applicable to titanium and its alloys (TAV and TAN), niobium and zirconium.

In the case of medical applications the coloration is usually applied in an identification purpose. Complete or selective treatment can be implemented. It is perfectly biocompatible in the case of dental and orthopaedic implants.

Applications

- > Medical: Dental and orthopaedic implants; screws, plates, staples as well as various instruments and apparatus components
- > Jewellery: Buckle ear, bracelet, chain and various decorative parts
- > Spatial: Case and structural components for which titanium is used thanks to its low density. The coloration is applied in order to adjust the thermo-optical properties of the components.

Biocoat™ is a product from the INNOSURF department, the innovation centre for the Estoppey-Reber group.