

Medichrom – Biocompatible



Instruments parts treated with *Medichrom*.

ing the temporary contact with internal organs of human body. *Medichrom* is so appropriate for the surface treatment of probes and other instrument dedicated to be in contact with internal organs.

Applications

> Medical: Probes and surgical instruments

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

***Medichrom* consists of a galvanic chromium coating. Chemical and electrochemical parameters have been optimized in order to obtain a particularly fine and well adapted structure mandatory for medical applications.**

Medichrom has been tested by an accredited laboratory in the USA. A 10 µm coating has been deposited on stainless steel 316L samples and immersed in a 0.9% sodium chloride and cotton seeds oil solution in accordance with the "USP" American prescriptions. The solution was then examined in both tests hereafter:

- > Intravenous injection on 5 mice and observation after 4, 24, 48, 72 hours.
- > Subcutaneous injection of 0.2 ml doses on 5 rabbits, each on 5 different spots on the right side of the back. The rabbits were observed after 24, 48 and 72 hours regarding irritation and toxicity symptoms.

Besides needles treated with *Medichrom* were implanted in the muscular tissues of the rabbits after sterilisation. These tissues were then macroscopically observed after one week of implantation.

Moreover "in vitro" biocompatibility tests were carried out in order to determine the cytotoxicity potential.

Each test mentioned above have successfully fulfilled the "USP" requirements and have in this way proved the effective biocompatibility of *Medichrom* concern-