

MEDICAL SUPPLIES AND METHOD OF PRODUCING THE SAME

ABSTRACT

Provided are medical supplies which have excellent antimicrobial activity and are superior in the durability of antimicrobial activity and in biocompatibility and to a method of producing the medical supplies.

A base material is treated by carrying out anodic oxidation treatment to perform electrolysis by applying pulsed current having a frequency of 50 to 10000 Hz to the base material in an acid electrolytic bath or alkali electrolytic bath, to form a film having micro pores and/or micro unevennesses having a density of preferably $5 \times 10^4/\text{mm}^2$ on the surface of the base material and then, by carrying out iodine-impregnation treatment to impregnate the film with iodine or iodine compounds. The iodine compound is preferably polyvinyl pyrrolidone iodine, β -cyclodextrin iodine or silver iodide. Further, the base material is preferably a metallic material and any one of Ti or Ti alloy, stainless steel, and a Co-Cr alloy having biocompatibility. The film may be formed by using any one of medicine treatment, thermal processing treatment and mechanical processing treatment or a combination of these treatments in place of the anodic oxidation treatment. This produces such an effect that medical supplies which have excellent antimicrobial activity and are superior in the durability of antimicrobial activity and in biocompatibility can be produced easily at low costs.

Figure 1