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ACCOUNTING OF THE BIOIMPEDANCE FEATURES AT HIGH FREQUENCY BY MODELS OF FRICKE AND COLE

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Authors

V. Sydorets, I. Pentegov, S. Rymar

Paton Welding Institute of NAS of Ukraine,
11, K. Malevicha str., Kyiv-150, 03680, Ukraine,
e-mail: sydorvn@gmail.com

Abstract

The principles have been analyzed that were used to create models of biological tissues describing the phenomenon of bioimpedance dispersion, i.e., the laws of its dependence on frequency. The advantages and disadvantages of the Fricke and Cole models are determined, as well as the frequency ranges in which they yield results that coincide with the experiment. It is shown that the Fricke model is more promising for its adaptation in the high-frequency region, where β -dispersion is observed. In this case, it becomes possible to use it to monitor the state of biological tissue during high-frequency electrosurgical interventions. References 10, figures 2.

Key words: bioimpedance, biological tissues, dispersion, Fricke model, Cole model.

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