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ANALYSIS OF THE IMPEDANCE MODEL OF A TWO-ELECTRODE CONTACT CONDUKTOMETRIC CELL

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Abstract

The results of the study of the electric model of a two-electrode conductometric cell when measuring with alternating current are presented. The proposed model is based on the series connection of two impedances, which describe the near-electrode processes and processes in the volume of the test solution. It allows you to separately evaluate the informative and non-informative parameters of equivalent replacement schemes. The results of a theoretical study of the frequency properties of the near-electrode and volume impedances are presented. Based on them, simplifications of the equivalent cell impedance substitution scheme for the frequency-measuring subbands are proposed. The results of the study of the components of the cell impedance are given. A number of parameters have been determined that allow an experimental assessment of the legitimacy of the application of the electric cell model. References 30, figures 5.

Key words: conductometry, cell, electrical model, impedance, electrolytic conductivity.

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