

功能高分子膜离子选择电极研究VI.压片PVC膜氯离子选择电极的暂态极化行为

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摘要

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Studies on functional polymer membrane ion-selective electrodes VI. Transient behaviour of the pressed pellet PVC membrane chloride electrode and its current-analysis performance

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Abstract Both fast triangle-wave potential sweep method and fast square-wave potential sweep method have been applied to study transient behavior of the functional polymer membrane chloride electrode. On the basis of current-time curve and potential-time curve, the electrochem. parameters of the electrode were calculated successfully under various conditions. The characterization of the level of ion transfer has been made by means of electrochem. polarization resistance R_r which is related not only to the membrane composition and its shape (area etc.), but also to concentration of the chloride ions in solution. The R_r values calculated from both methods are the same. Cl^- in the concentration range of 10^{-4} - 10^{-1} mol/L showed linear relation between i and $\log c$, where c is the concentration. The slope is proportional to the membrane area.

Key words [ION SELECTIVE ELECTRODE](#) [POLYVINYL CHLORIDE](#) [CHLORINE ION](#) [POLARIZATION EFFECT](#) [MEMBRANE ELECTRODES](#) [POLARIZATION](#) [POTENTIOMETRIC DETERMINATION](#) [POLYMER FILMS](#) [TRANSIENT CHARACTERISTICS](#)

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