



Potentiometric Determination of Fixed Charge Density and Permselectivity for Silver Thiosulphate membrane

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ABSTRACT

Effective fixed charge density of silver thiosulphate (parchment supported) membrane in contact with various 1:1 electrolyte solutions have been determined from membrane potential measurements. The methods used for the estimation of charge densities were: the Teorell-Meyer-Sievers method (T.M.S.), Altug and Hair method, and the recent theories for membrane potential of Kobatake et al. and Nagasawa et al. The values derived from different theories were almost the same, confirming thereby the validity of the recently developed theories of membrane potential for the evaluation of effective fixed charge density of the system under investigation. Apparent transference numbers of coions and permselectivities of the membrane-electrolytes have also been calculated. A method based on permselectivity values for determination of charge density was also used.

Keywords: Membrane potential, Fixed Charge density, Potentiometry.
