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The Membrane Potentials of Periderm and Cuticular Membranes

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Abstract: The membrane potentials of periderm and cuticular membranes were measured with KCl and NaCl solution using Ag/AgCl electrodes. For the electromotive force (emf) measurements, the concentration in both compartments were brought to equilibrium with the 0.01 M concentration of KCl or NaCl solution, then the one side was kept constant and the other side changed. The estimation of the Donnan potential contribution to the membrane potential was carried out by taking into account the fixed charge concentration, C_x, value. From these measurements electrochemical characterization of the asymmetry and surface layers of the periderm and cuticular membranes can be described.

Key Words: Membrane potential, periderm membrane, cuticular membrane, fixed charge concentration, asymmetric potential

Keywords
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