

Physiological and Hemolytic Toxicity of Some Aminophosphonates

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The effect of novel synthesized aminophosphonates on membrane potential and electrical conductance of internodal cells of *Nitellopsis obtusa* and hemolysis of erythrocytes (RBC) was studied. It was found that those the organophosphorous compounds, when present at 10-100 μM concentrations, caused depolarization and increased electrical conductance of alga membranes. They also influenced fluidity of erythrocyte membranes. When used at higher concentrations aminophosphonates caused hemolysis of RBC. The changes observed depended on structural features of the aminophosphonates, i.e., substituents at the carbon, phosphorus and nitrogen atoms, and, most probably, may be the result of direct interaction of the aminophosphonates with the lipid phase of the plasma membrane and the induced structural changes. Two modes of interaction are proposed.