

**The prehemolitical changes in human erythrocytes treated with 2,4-dichlorophenoxyacetic acid (2,4-d).**

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Using flow cytometry and phase contrast microscope (Olympus, Japan) we estimated changes in size and shape of human erythrocytes after their incubation with 2,4-dichlorophenoxyacetic acid (2,4-D). Statistically significant prehemolytic changes in the plasma membrane of erythrocytes incubated for 1 hour with 200-2000 ppm of 2,4-D were observed. 2,4-D caused significantly changes in cell morphology, induced creation of echinocytes and finally provoked low degree of hemolysis. A 2,4-D - induced decrease in the level of ATP and simultaneous increase in the content of ADP and AMP which led to the fall of the level of adenine energy charge (AEC). The decrease in the ATP level under the influence of 2,4-D might result in to changes in the shape of erythrocytes from discoid to echinocytic.