CYTOGENETIC EFFECTS INDUCED BY POTASSIUM FERRICYANIDE ON MITOTIC DIVISION AT *CUCUMIS SATIVUS* L.

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Abstract
The paper presents the influence of potassium ferricyanide on the cellular division at *Cucumis sativus*. The treatments with potassium ferricyanide was used in three concentrations: 0,5%, 0,25%, 0,1% and the time of action of the respectively solutions was 2 hours, 4 hours, 6 hours, 24 hours and 48 hours, fifteen experimental variants have resulted.
The treatments actioned of on cucumber radicular meristems and was noted a inhibitory effect on mitotic division of *Cucumis sativus*, diminish the mitotical index, in correlation with the concentration and time of action by potassium ferricyanide. Moreover were expressed by chromosomial mutations, particular in ana-telophases, but in metaphases. The types of chromosomial aberrations in cucumber radicular meristems, induced by potassium ferricyanide are very varied: chromosomial bridges, retardatary chromosomes, chromosomial fragments, simple and complex multi-polar ana-telophases. Aberrant metaphases consisted in genetically inert picnotic chromosomes, which are spread in the entire mixoplasma. The rate of this types of chromosomial aberrations was differentiated depending on the concentration function and time of action of respective chemical agent. The cells reacted differently in each phase of mitotic division to the action of the chemical agent: the proportion of cells in prophase, metaphase, anaphase and telophase is diminish in compareson by control. The experiment proved that potassium ferricyanide known as an aggressive environmental polluting agent is a potent inhibitor of cell mitogenic and a real mutagenic potential upon mitotical cells. The experiment demonstrates the harmful effect of potassium ferricyanide on vegetable orgnisms. Therefore, in this experiment is evidently the inhibitor effects to the mutations, what confirm the speciality literature.

Key words: *cell, potassium ferricyanides, mitotic division, chromosomial aberration, picnotic chromosomes*

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