



Citogenetic effects induced by sodium nitrite on mitotic

PĂDUREANU Silvica - USAMV Iași

The paper presents the influence of sodium nitrite on the cell division at *Triticum aestivum* L., Rubin variety. The treatments with sodium nitrite was used in three concentrations: 5%, 1% and 0.1%. The time of action of the respectively solutions was 4 hours and 2 hours, six experimental variants have resulted. The treatments actioned of on wheat radicular meristems, were expressed by chromosomal mutations, particular in ana-telophases, but in metaphases. The types of chromosomal aberrations in wheat radicular meristems, induced by sodium nitrite are very varied: bridges, fragments, complex multipolar ana-telophases, micronuclei. The rate of this types of chromosomal aberrations was differentiated depending on the concentration function and time of action of respective chemical agent. Beside of these types of chromosomal aberrations appear metaphases with picnotic chromosomes, chromatin bridges very thick known with denomination cytomixiy, also picnotic nuclei in high rate, genetically inert. Last types of cromosomal aberrations are considered special effects of sodium nitrite. Moreover, sodium nitrite has a inhibitory effect on mitotic division of *Triticum aestivum*, diminish the mitotical index, in correlation with the concentration and time of action by sodium nitrite. The cells reacted differently in each phase of mitotic division to the action of the chemical agent. The experiment proved that sodium nitrite known as a polluting agent and a food additive has a real mutagenic potential and inhibitory upon vegetable mitotical cells.