Aberaţii cromosomiale mitotice induse prin tratamentul cu acetat de plumb la speciile Larix decidua L. şi Picea abies L. aparţinând familiei Pinaceae

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The lead acetate is a powerful mutagen agent that determins the appearance of cells with chromosomal aberrations in plants and also in animals. It has been studiend the influence of this substance on the germinated seeds belonging to two species: Larix decidua and Picea abies from the family Pinaceae. The research pursued the evaluation of the mitotic index, the frequency of the cells with chromosomal aberrations comparatively with the cells without genetical mutations,that followed to the treatment with the mutagenic agent in three different concentrations: 0.1, 0.2 and 0.3%. The time of exposure of the seeds to the influence of the lead acetate was 12 hours, 24 and 48 hours for each of the three concentrations. The evolution of the mitotic index for the species Picea abies is homogeneous, the concentrations of 0,1 and 0,2% of lead acetate determined the increase of the mitotic index and the 0,3% concentration decreased this value. In the case of Larix decidua species,it couldn't be established a pattern of evolution of the mitotic index refering to the concentration of the mutagen agent. Regardless of the concentration of the lead acetate, the exposure time of the seeds to the action of the mutagen agent and the species that has been used,it has been observed that the prophase is the dominant phase of the mitotic division, followed in the most of the cases by metaphase. The frequency of the cells with chromosomal aberrations is different at the two monitorised species. The larch tree proved to be more tolerant to the action of the mutagen agent than the spruce fir. The frequency of the aberrations cells at larch tree is between 0,21-3,55% comparatively with the spruce fir where the range of frequencyis between 0,30-4,89%. The most encountered tipes of chromosomal aberrations are the bridges, the retardatory chromosomes, the expelled chromosomes, the fragments, the multipolar A-T and the micronuclei.