



EVALUATION OF THE GENOTOXICITY OF WATER BOTTLED IN PET RECIPIENTS

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Abstract

The aim of this study was to establish the possible toxicological effects of chemicals released into mineral water bottled in polyethylene terephthalate (PET) bottles, preserved at room temperature and at 48°C, by *Allium* test. There were analyzed the growth tests, as well as chromosomal and genomic mutations.

In all experimental variants the mitotic index was lower than in Control, the mitosis process being disturbed, fact correlated with growth results. There was observed a decrease in prophase percentage and an accumulation in metaphase, in both variants thermic treated. In prophase and metaphase were observed metabolic disorders, probably due to some deficiency in protein synthesis. The most frequent chromosomal aberrations were bridges, acentric fragments, ring chromosomes, but also centromere inactivation. *Allium* test is very sensitive, reacting to low concentrations of toxic chemicals, and thus can be used as a first alert.

Key words: *Allium* test, mineral water, PET

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