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Study of Genotoxic Effects of Tonarol

Karamova N., Il'inskaya O., Ivanchenko O., Ermolaev A., Gil'mutdinov G., Gershanov F., Khamitov B.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

Genotoxic effects of 2,6-di-tret-butyl-4-methylphenol (tonarol) were studied using four test systems: the Ames test, the SOS chromotest, the cytogenetic test with rootlets of onion (Allium cepa), and the in vivo micronucleus test. Tonarol did not affect gene mutation induction in Salmonella typhimurium tester strains, the SOS response in the Escherichia coli strain PQ37, chromosomal aberrations in cells of onion (Allium cepa) rootlets, and micronuclei in erythrocytes of peripheral blood of CBA × C5713 L/G mice. Tonarol induced cell division in A. cepa rootlets at concentrations of 25-100 mg/l, indicating that this compound can affect mechanisms of cell division, growth, and differentiation.