ANTIOXIDANT ACTIVITY OF ETHOXYQUIN SALTS

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The study is a part of the research aimed at studying of new potential preservatives and comparing them with activity of EQ, an antioxidant used as a preservative in animal feeds. Unfortunately, the harmful effects were observed in animals fed with EQ-containing feeds. Antioxidant activity of two ethoxyquin salts (ethoxyquin L-ascorbate and ethoxyquin *n*-hexanoate), newly synthesized potential antioxidants, was studied on human lymphocytes with the use of the comet assay and the micronucleus test. In the comet assay the ethoxyquin salts effectively reduced DNA damage induced by hydrogen peroxide used at the concentration of 10 µM. In the micronucleus test the protection of cells against oxidative stress induced by hydrogen peroxide (75 µM) was also seen, but the difference in micronuclei frequency observed between the samples treated and non-treated with EQ salts was not statistically significant. The comparative analysis of EQ salts and EQ studied earlier, revealed that the activity of the studied salts is comparable to that of EQ; especially ethoxyquin *n*-hexanoate is the promising potential antioxidant and detailed studies are needed to estimate its usefulness as a preservative.

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