

Assessment of the antioxidant properties of plant and chemical origin dietary supplements in the model test system

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Abstract

© Medwell Journals, 2018. For the test model system, the chemiluminescence method has been chosen which makes it possible to evaluate the processes of free-radical oxidation and objectively characterize dietary supplements having pro or antioxidant properties. The dietary supplements of plant origin (erakond, milk thistle and carsil) and of chemical origin (santochin, emecidine, iodine-matrix compounds) are used to care metabolism. Dietary supplements have antioxidant properties, also, slow oxidation processes and can be essential for correction of metabolism. The intensity of many enzymatic and non-enzymatic reactions determines the formation of free radicals which are formed in pathology and as a rule, increase the oxidation processes disrupting the structural compartments of the cell (cell membrane organelles, nucleus, etc.). For the regulation of metabolism, we offered doses or dietary supplements matrices that change the rate of free-radical oxidation and reduce the development of pathological changes in the body. Then, the reactions of free-radical oxidation in the body were studied. In this study, we studied synthetic and plant nutritional supplements and also, determined the activity of oxygen forms and the sum of luminosity on model systems of different kinds. Also, the above mentioned dietary supplement was activated with the help of various substances for the activity of lipid oxidation. As a more complex model for the study of chemiluminescence, complex compounds were also studied. As an example, iodine is a pro-oxidant but associated with pectin changes its properties. Another dietary supplement is an Erakond-antioxidant which enhances its properties with pectin or chitosan. The proposed dietary supplement model assessment allows us to make an objective conclusion about the properties of the substance and its changes with complexing compounds.

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Keywords

Carsil, Chemiluminescence, Dietw supplement, Erakond, Milk thistle, Model system, Pectin, Santohk oxymethylmcyll

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