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DEFINITIONS REDOX POTENTIAL LONGEVITY PREDICTION FOR PLANT PRODUCTION

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Vegetable products, which lies on the long-term storage after processing it including and electro-technological methods require monitoring of all vital processes (breathing, assimilation of carbon dioxide by plants metabolism) to reduce any weight loss and preserve the natural extension of the quality of the product.

The aim - to establish the possibility of predicting keeping quality plant products with succulent tissues using redox potential.

Materials and methods of research. Vital processes of plant foods rich fabrics during storage depend on many factors (variety, quality products while laying etc.) that affect the passage of chemical reactions in the product. By controlling these reactions during storage can affect the plant, increasing its keeping quality and receiving end storage products of higher quality.

Given that one of the plant product rich fabrics consists of a living cell, which are constant processes of respiration, metabolism etc., They are always oxidation-reduction chemical reactions.

Results. We know that herbal products are characterized by a particular redox potential, that amount of energy that must be put to detach an electron from the atom.

In conducting our research, the impact of changes in redox processes of plant products with succulent tissues for long periods of storage, it was found that the value of the PLO, as well as mass production, significantly changing. This is due to a change in the intensity of plant life in different periods of storage. The explanation of these processes is a thermodynamic

theory elements driving forces and electrode potentials, namely standard potential reaction (E0) (standard EMF reaction). This potential difference equal standard ORP participating in the reaction redox pairs (napivreaktsiy) and is associated with a standard Gibbs energy change (ΔG0). This figure shows the change of energy in the process of passing the chemical reaction and promotes the possibility of chemical reactions).

Findings

The above material gives every reason to believe that during the recovery plant products (after harvest and during the period mid keeping quality) of their natural properties it is an intensive renovation of chemical processes, and hence accelerate redox processes, leading to an increase in its ORP (> 0). And in times when the plant is dormant chemical reactions inhibited. (AFP <0).