

food ones, as well as health resort, medical, educational, industrial and other institutions.

In order to improve the provision of services, attract new customers and create competitive products, most of these establishments develop menus with a physiological effect on the human body (e.g. "dietary dishes", "vegetarian cuisine", "vitaminised dishes"). This, in turn, requires not only the availability of fresh plant raw materials, but also the presence of high-quality fruit and vegetable additives.

Drying is the process of dehydrating a product by evaporating the liquid retained in it, changing the temperature of the product. Dried vegetables can be sold in a variety of forms: cubes, slices, chips, straws, powders of various dispersion. Vegetable powders can be stored for a long time without deterioration in quality with almost complete preservation of the original nutritional value and can be used in the technologies of convenience foods.

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DETERMINING CHARACTERISTICS OF LIVING ORGANISMS WITH CONSIDERATION FOR VIBRATIONAL PROCESSES

The ambient atmosphere surrounding a person is saturated with physical fields of various natures, including acoustic ones. It affects living organisms both positively and negatively. Simultaneously, when the resonant frequencies of living organisms' individual organs coincide with certain frequencies of acoustic fields, it can have a detrimental effect, at high oscillation amplitudes.

Noteworthy, that it is necessary to know the mass and stiffness of the body of insects in order to have a negative acoustic effect on their body [1, p. 107]. Tissue rupture and biological death of harmful insects under the influence of acoustic vibrations indicate that the resonant frequency of the body or organ has been found. A method of rupturing bodies, organs, or tissues of a biological object can be

developed by applying a strong influence of an oscillatory nature. Destruction not only of the beetle but also its larvae, as a biological object that is a viscoelastic system, is possible through the influence of vibrational or acoustic oscillations on the body [2, p. 31; 3, p. 1]. This leads to the question of the frequency range of influence, clarification of the larva's body mass and stiffness.

The larvae of the Colorado beetle became the object of our experiment. Measurements of parameters and characteristics were conducted for each larva individually. Preliminary examination showed that the larva's body had reached an age when the head and legs appeared and had an oval-convex shape, widening from the head. During the experiments, the larva's weight was determined, its length measured, and the body diameter at the maximum cross-section. Then the larva's body was placed in a special device. Loads were applied vertically downward onto the larva's body with forces P1, P2, P3, P4, P5.

Changes in the body dimensions, i.e., body shortening under the action of force (compression magnitude), were recorded by a micrometer. All readings were recorded and entered into the measurement log. After the impact, an external examination of the larva's body was conducted.

The indicators of the force impact and measured values were entered into the table. The obtained data allowed for the calculation of the modulus of elasticity and stiffness of the larva's body as a homogeneous rod.

The developed technique has allowed the frequencies of the acoustic field generation used to kill the larvae to be determined. This will allow them to be destroyed in a more environmentally friendly and efficient way.

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