Mixture of Vegetable Oils with Balanced Fatty Acid

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Vegetable oils and other fat products used for direct consumption and for food production generally do not have an optimal fatty acid composition, which according to modern ideas is determined not only by the content of polyunsaturated fatty acids (PUSFA), but also the ratio of acids of the omega-6 and omega-3, primarily linoleic and linolenic, which are functional ingredients of fat products of the healthy nutrition group.

Among plant fats, linoleic and linolenic acids are essential. They are not produced in the human body; their absence causes negative health consequences.

Analysis of various vegetable (sunflower, rapeseed, linseed and safflower) oils showed the possibility of providing the human body with polyunsaturated fatty acids by using a mixture with a balanced fatty-acid composition, namely, the required ratio of [omega]-6 and [omega]-3 acids.

As components of a mixture of vegetable oils with a balanced fatty acid composition, it is recommended to use sunflower,

linseed and safflower oil, which are successfully produced in the Republic of Kazakhstan.

It was experimentally determined that in order to eliminate odor in a mixture of vegetable oil with linseed oil content, its mass fraction should not exceed 5%.

In laboratory studies, sunflower, safflower and linseed oil were used in a ratio of 85:10:10; 85:15:00 ; 80:15:05. The resulting mixtures were examined by fatty acid composition.

Studies of the fatty acid composition found that the use of vegetable oils (sunflower, safflower, linseed) in a ratio of 80:15:05 allows to obtain a new product with an acid ratio of [omega]-6: [omega]-3 -9: 1.

It was established that vegetable oils, namely sunflower, safflower and linseed, in a ratio of 80:15:05 provides a ratio of [omega]-6 and [omega]-3 acids of 9:1, which corresponds to the optimal ratio of [omega]-6: [omega]-3 in the diet of a healthy person (9.. 10): 1.