



Mixture of vegetable oils with balanced fatty acid composition

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Abstract

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.



Biography:

Almas Mukhametov has completed his PhD in 2019 at Kazakh National Agrarian University. He is assistant at the Department of Technology and Safety of Food Products in KazNAU, also he is supervisor of research project connected with oil products

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Speaker Publications:

1. Fatimah M Yousef, Hala Kattab and Heba Abbas Sindi (2018) Effectiveness of Moringa oleifera L. leaves extract against methotrexate-induced acute hepatotoxicity in male rats. International Journal of Pharmacology 14:1029-1037.
2. Heba Abbas Sindi, Fatimah M Yousef and Bayan AbdulhafidAljahdali (2018) Vitamin D status and autoimmune disease (Hashimoto's Thyroiditis) in Saudi Arabian Women. International Journal of Pharmaceutical and Phyto Pharmacological Research (eIJPPR) 8(1):21-26.
3. Heba M Alsubhi, Fatimah M Yousef, Hani Zohair Almarzouki and Heba Abbas Sindi (2018) Effect of vitamin D and calcium supplementations on reducing the incidence of hypocalcemia after thyroidectomy. World Journal of Medical Sciences 15(2):69-75. ISSN 1817-3055.
4. Fatimah M Yousef (2017) Associations factors affecting on osteoporosis in postmenopausal women in Saudi Arabian, Jeddah. International Journal of Pharmaceutical Research & Allied Sciences, 6(2):204-212
5. Roaa A Alkhairat, Fatimah M Yousef and Heba A Sindi (2018) Effects of Salvia officinalis L. (Sage) on cognitive impairment in Saudi aging people. International Journal of Current Research 10(05):69358-69362.

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