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# **Technology for Enriching the Daily Food Ration of Military Personnel with Oil from Kernels**

**A.I. Khurramov, R.M. Abdiyev, H.Kh. Kurbannazarov, D.K. Khusanova, A.V. Fomichov,  
F.I. Usanov**

Chirchik higher tank command engineering school, Teacher. Uzbekistan.

**ABSTRACT:** The article talks about the need to train young military personnel with high intellectual potential, modern thinking and worldview, ready to selflessly defend the interests and sovereignty of our state, and for this it is necessary to pay attention to a healthy lifestyle of our young personnel, sports and, of course, proper nutrition. In order to solve this problem in the nutrition of military personnel, it became necessary to develop a new device for biting off apricot and almond seeds.

**KEY WORDS:** high intellectual potential, military-patriotic, healthy lifestyle, fatty products, composition of kernels.

## **I. INTRODUCTION**

Today, as part of the implementation of the adopted concepts of military-patriotic education of young people and increasing the effectiveness of spiritual and educational work in the system of the Armed Forces of the Republic of Uzbekistan, large-scale work is being carried out to educate young people who are fully developed, educated, and dedicated to serving their people, as well as the Motherland.

It is necessary to ensure the active and consistent implementation of the state policy aimed at creating a system of education of a fully developed, physically healthy and spiritually mature young generation with high intellectual potential, modern thinking and worldview, ready to selflessly protect the interests and sovereignty of our state [1].

## **II. LITERATURE REVIEW**

Research has been carried out on the improvement of the technology for obtaining oil from fruit seeds and technical seeds by such scientists as V. G. Shcherbakov, A.M. Goldovsky, V. M. Kopeikovskiy, S. I. Danilchuk, G. I. Garbuzova, B. E. Kirievskiy, P. P. Demchenko, V. V. Klyuchkin, R. D. Sh Bryan, S. R. Gregory, E. Hernandez, B.R. Savoy, S. W. Smith, J. T. Kotren, L. A. Jaunes, S. S. King, P. J. Vaklian, P. J. Van.

**Classification of seed products** (apricot, grape, cherry, peach, plum) oils are obtained by processing seeds that are waste products of the production of juices, jams, dried fruits and the canning industry. These healing oils are mainly used in the production of food products, and are also an important raw material for the production of soap. Refined seed oil is a valuable food product and is used for frying fish, vegetables, various salads, pastries and other products.

Apricot, grape, cherry, peach, plum oils and mixtures of these oils are presented on the world markets. The raw materials used for the production of oils contain from 20 to 45 percent of the oil, which is separated from the seeds before processing (except for grape seeds). The purified and crushed raw materials are subjected to heat treatment, dried and pressed. And the grape seeds are sent for processing together with the peel. These oils are characterized as follows:

**The need in European countries** – the growing number of market research in Europe and the widespread use of natural ingredients open the door to wide opportunities for the production of fruit seed oils. The fact that European consumers, who are particularly concerned about their health, are well aware that these products are useful for well-being and health, creates the basis for the growing demand for medicinal oils.

The volume of imports of these seed oils in Europe increases by an average of 6% every year. Because this product is widely used in various fields, especially in cosmetics.

**France** is the most popular market for the sale of special seed oils used in cosmetics. Developing countries export only about 9% of the oil imported into this country. The main suppliers of seed oils are Spain, the Netherlands, Germany and Belgium.

Since 2012, the import of these products has been growing faster in **Austria** than in Europe. In 2018, the main suppliers of essential seed oils were the countries of Spain, the Netherlands, Germany and Lithuania.

**Italy, Great Britain and Switzerland** although they are small importers of seed oils, these countries are interesting markets for your product. A large share of imports of these products to Italy and the UK is accounted for by developing countries (from 35 to 38 percent). Over the past five years, the import of seed oils from developing countries to Switzerland has grown significantly (by 9% per year).

### III. FORMULATION OF THE PROBLEM

For this, it is important that our young cadres pay attention to a healthy lifestyle, play sports and, of course, eat right. Because our young military personnel should grow up in a short time as physically and mentally mature specialists. At the same time, it is necessary to form a strong memory, deep thinking, and the ability to make emergency decisions in our military. That is why it is more correct to eat foods rich in vitamins, such as the kernel of the seeds of fruit trees and fatty seeds, which develop mental abilities, increase brain activity and help maintain good health.

President Sh.Mirziyoyev called 2021 "The Year of support for Youth and strengthening the health of the population". Indeed, human health, especially military personnel, is a very important and necessary condition for health.

Currently, only one city of Tashkent uses an average of 38 tons of oil per year, which means that every citizen accounts for at least 15 liters of oil per year. 60% (percent) of people use sunflower oil, 35% choose cottonseed oil and only 5% choose other oils. These include olive, flaxseed, almond and others. For this reason, as a result of research, it was found that the main causes of various diseases occurring among military personnel are the harmful elements contained in our daily consumed fats. An unhealthy and not cheerful serviceman cannot be entrusted with the protection of the Motherland [3].

Hot dishes in the daily diet of our servicemen are mainly made from "cottonseed oil", which is harmful to human health. In medicine, it has always been proven that the use of one type of fatty product is harmful to human health. Enriching the daily diet of military personnel with apricot and almond oil, rich in vitamins, shown in Fig. 1, according to which it is necessary to carry out in stages.

Currently, the work on improving the quality of daily provision of military personnel with food, that is, on enriching the food ration, is carried out on the basis of guidance documents, but several problems arise in the implementation of this work.

The products prescribed in the daily rations of military personnel are purchased mainly from entrepreneurs, i.e. there are no devices in the Security Council for splitting apricot and almond seeds, as well as for extracting oil from the seeds. By the relevant resolutions of the Cabinet of Ministers, dry fruits were included in the ration of food rations of servicemen of the Armed Forces of the Republic of Uzbekistan, according to which, during the period of hostilities, one cup of a hot dish is substituted for 100 g of almond kernel for each serviceman. But almond-splitting devices are not available in the Security Council. And buying finished products at retail from an entrepreneur will cost much more.



Figure 1. Apricot seed oil in a bowl

**IV. METHODOLOGY**

In order to solve this problem in the nutrition of military personnel, it became necessary to develop a new device for splitting apricot-almond seeds [5, 6, 7, 8, 9].

If this device is developed, then you can achieve:

- apricot and almond seeds bring great economic benefits, dramatically reducing the cost of purchasing seeds and the oil extracted from them;
- Military personnel receive scientific and methodological access to researchers conducting scientific research on nutrient enrichment;
- to increase the design potential and provide useful lubrication for the personnel involved in the creation of the device;
- providing military personnel with vitamin apricot and almond oil during combat missions, as well as providing daily hot meals obtained from apricot and almond oil at least twice a week.

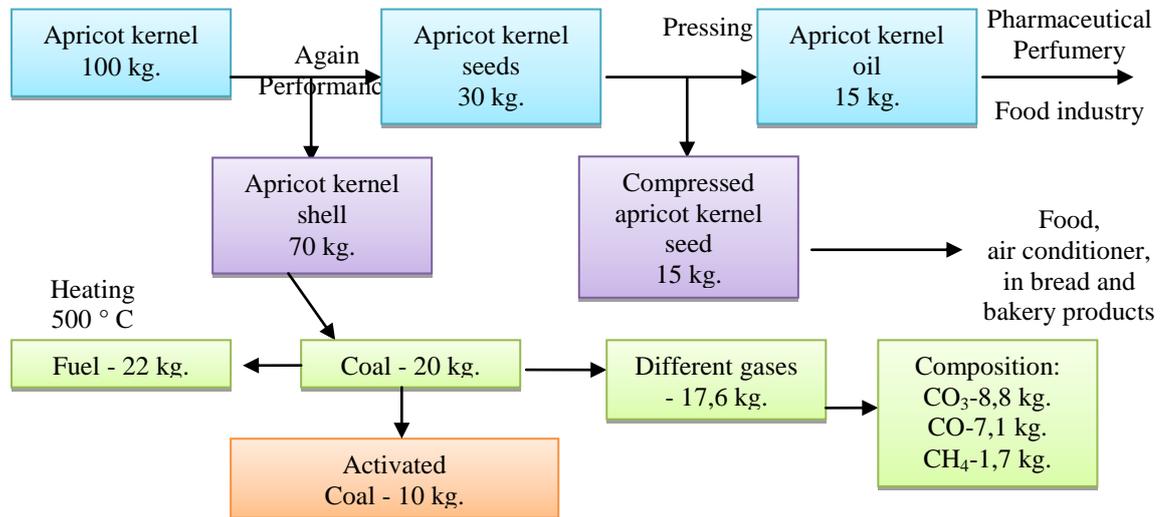


Figure 2. Scheme of complex processing of apricot seeds for material support units

In addition, apricot-almond oil is introduced into these units in order to improve the health of military personnel, enrich a delicious daily diet and provides the following:

- after the isolation of apricot and almond oil in the system of the Defense industry and its application in the feed diet of military personnel, it will be possible to recommend this experience for use in the national economy and sell scientific experiments;
- when using apricot and almond oil in the diet of military personnel, diseases such as cirrhosis of the liver, kidney failure, heart attack, cardiovascular diseases, skin diseases, allergies, hair loss, infertility and many others are prevented;
- In the book "The Canon of Medical Science" by our grandfather Abu Ali Ibn Sina, it is written that every person should consume up to 10 pieces of apricot or almonds daily, which is a cure for many diseases and strengthens memory. Because one core of the bone contains 60% fat. That is why it is necessary to supply our servicemen with apricot or almond seeds every day [2, 3, 4];
- do not violate the food intake regime, provide military personnel with vitamin and nutritious apricots and almond kernels during combat operations [10].

**V. METEOROLOGICAL AND LOAD CALCULATIONS**

The scientific significance of the research results is due to the fact that when obtaining oil from fruit seeds, an energy-efficient electrical technology was developed that allows reducing the overall energy consumption of the



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process and increasing the oil yield by pre-electric pulse processing of the kernels of the seeds or grinding them using special devices, functional dependencies and patterns between the device parameters and the output volume of oil were established.

The practical significance of the results of the study is due to the fact that in the processes of obtaining oil from fruit seeds on the basis of electric pulse processing of the kernels of seeds from fruits or using special devices using energy-efficient electrical technology, an increase in the amount of oil obtained by 4.5 - 5%, improvement of quality indicators and reduction of electricity consumption to 35% [11, 12, 13].

## VI. RESULTS AND DISCUSSION

**Conclusions and recommendations:** It is not for nothing that the sultan of medical science, a great medical scientist, our great-grandfather Abu Ali ibn Sina wrote in his scientific treatises that a person should consume up to 10 grains of apricot seeds daily.

Apricot juice is consumed with pleasure by the residents of our republic. This raises the question of separating the apricot seeds and serving them on the table of our people.

The process of splitting the seeds of fruit trees is carried out by private entrepreneurs with the help of manual labor, that is, there was no technical electrified or mechanized device that would perform it.

Thus, the introduction of our proposed method of obtaining oil by splitting and separating the seeds of fruit trees is a convenient equipment for the defense industry, which allows us to deliver products from oil seeds to our young military personnel without wasting time and labor.

## REFERENCES

1. PD-4375 "On additional measures to educate teenagers in the military-patriotic spirit and improve the system of training the personnel reserve for the Armed Forces and the civil service of the Republic of Uzbekistan" Sh. Mirziyoyev. Tashkent, June 28, 2019, 1 p.
2. Abu Ali ibn Sina. The laws of Medicine. 1-5 books. Tashkent, science, published in 1979-1983.
3. Nortosh Ulzhaboeva. Jewels from the treasury of traditional medicine. Tashkent, "New generation of the century", 2009 y., 1135 p.
4. Haji Mengnazar Rustam ogli. "There is pain, there is strength." Tashkent, "Science", 2005 and 2006. 59 p.
5. A. Mardonov, B. Yunusov. Kinematic and dynamic parameters of the modernized device for splitting bones, (article in Uzbek). Journal. "Agro-ilm", No. 4 [36]. Tashkent:2015, 91 p.
6. Haidarov E. A., Malikov R. H., Yunusov B. A., Raupov T. A device for splitting the shells of fruit seeds to extract kernels from them. A patent for a utility model. FAP No. 20080066 of 05.06.2008y.
7. Device for splitting the shell apricot stone Byshov N. V., Borychev S. N., Byshov D. N., Lipina T. V., Topilin V. P., Lipin V. D., Staforkin N. S. patent for a utility model RUS 164601 11.04.2016y.
8. Device for breaking the shell of a bone Kurylenko N. I., Nevzorov V. N., Golubev I. V. patent for the invention RUS 2339280 21.05.2007y.
9. KHurramov, A. I. and Yunusov, B. A. (2018) "The mechanism for cracking the fruit kernerls," Bulletin of the Agrarian Science of Uzbekistan: Vol. 2018 : Iss. 1 , Article 9.
10. Oripov R., Suleymanov I. Umurzakov E. Technology of storage and processing of agricultural products. T., Trud, 1991, page 45.
11. Shcherbakov V. G. Technology of obtaining vegetable oils. - M.: Kolos. 1992 -- p. 206.
12. Koshevoy E. P. Technological equipment of vegetable oil production enterprises: Textbook for universities on spec. "The technology of fats, essential oils and parfais. - kosm. prod. " - St. Petersburg: GIORD. 2001 -- p. 368.
13. Akaeva T. K., Petrova S. N. Fundamentals of chemistry and technology for the production and processing of fats. Part 1. Technology for the production of vegetable oils: GOVPO Ivan. state chemical-technol. un-t; Ivanovo. 2007. – C. 124.