

MODERN TECHNOLOGIES AND PROMISING TRENDS IN OIL PROCESSING

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Annotation: In the world today, it is important to ensure the food security of the population and food industry in meeting the need for food at an acceptable level is important. Therefore, produce local food and raw materials sustainable development of production, safe and quality food to the market the main thing is to deliver products in the assortment established by consumer standards remains one of the tasks.

Keywords: Oil industry, oilseeds, food industry, extraction, oily raw materials, fruit seeds and vegetable seeds, margarine products, mayonnaise, deodorization, packaged vegetable oil, meal, oleic acid Repeat etc.

After gaining independence, a high-tech food industry was formed in our country, and today it is becoming one of the leading sectors of our economy. Special attention is being paid to ensuring food safety, filling the domestic market with quality food products, modernizing production, launching new capacities, and developing import substitute products. The measures taken to encourage and support the modernization and diversification of production ensure the growth of food production.

In this regard, a number of activities are being carried out by our government, in particular, the decision of the President of the Republic of Uzbekistan dated January 19, 2018 PQ 3484 "On measures for the rapid development of the oil industry" was adopted. This decision, adopted by the head of the government, is aimed at ensuring the rapid development of oil-oil enterprises and starts a new stage of further improvement of the enterprises' activities. It serves to create favorable conditions for expanding the range of oil products, creating a healthy competitive environment, improving product quality, and providing the population with guaranteed food products.

On January 16, 2019, Presidential Decree No. PQ-4118 "On additional measures for the further development of the oil industry and the introduction of market mechanisms in the management of the industry" was adopted[2]. By decision, the Association of Oil Industry Enterprises was established. The main task of the "Uzyogmoysanoat" association is to develop a strategy for the processing of oil raw materials and the development of the oil industry. Until January 1, 2022, the association was exempted from property tax and profit tax. Oil industry enterprises were given the opportunity to postpone the payment of value added tax on the import of caustic soda, activated natural mineral products and catalysts, which are not produced in the country until January 1, 2022, for 90 days.

The republic's oil industry has a long history. But only after the independence of Uzbekistan, the period of real development began in the oil industry, as in all areas. Therefore, today there are more than 240 large and small oil-oil enterprises in our country, which produce 60 types and more than 200 assortments of oil-oil products. 80 of the enterprises produce vegetable oil, 38 of them produce margarine products, 25 of

them produce mayonnaise, 94 of them produce household and perfume soap, and 3 of them produce distilled glycerin products. The manufactured oil products fully meet the requirements of the technical regulation UZTR 520-023:2017:2017 "On the safety of oil products". ISO 9001:2015 and ISO 22000 international quality standards have been introduced in enterprises. More than 80 largest enterprises equipped with modern technologies in our country are members of the "Uzyogmoysanoati" association. Products produced in network enterprises, in particular cottonseed oil and household soap, are exported. Koson, Guliston Oil Extraction, Fergana Oil-Oil, Kokan Oil-Oil, Tashkent Oil-Oil, Kattakorgan Oil-Oil, Surkhanozigootsanoat and Urganch Oil-Oil Contributory Societies are the largest in the network. are large enterprises.

One of the important and complex areas of the food industry is the oil industry. The structure of the oil industry includes oil extraction enterprises, enterprises with final products, natural vegetable oils (cotton, sunflower, soybean, sorghum, etc.), margarine production enterprises, soap production enterprises. Due to the large number of production processes and the diversity of the enterprise structure, the equipment of oil industry enterprises is also diverse. According to the maintenance of the equipment, their construction and technological process, the equipment is automated, semi-automated and non-automated. From year to year, the automated equipment entering the complete lines in enterprises is taking the first place, and in the future they will work according to a special program, their control and management will be carried out using electronic computing machines.

In the global oil production industry, soybean, palm, rapeseed, sunflower, and peanut oils make up a large amount for food. These vegetable oils make up 80% of total production. In particular, in the last 10 years, the production of rapeseed has developed dramatically, and the production volume of rapeseed oil currently ranks third. Automation of technological processes and equipping with equipment of foreign companies are continuing in the enterprises of the network. In the technical re-equipment of enterprises, Sket (Germany), Alfa-Laval (Sweden), John Brown, Carver, Crown, Massoni, Bollista (Italy), Henan Huatai Cereals And Oils Machinery Co. (China), Sunman Engineering (India), Turkey, Poland, Ukraine, Russian companies are working well.

In recent years, oil and gas enterprises of our Republic have been intensively working on the establishment of new technologies with the participation of foreign investors and, at the same time, the creation of new types of products. equipment works are being carried out.

Margarine and mayonnaise products, as well as a significant part of household and perfume soap, are products produced in the enterprises of our republic. The import of these products is decreasing year by year. This, in turn, indicates the development of the production of hydrogenated and transesterified oils. Based on the above, factories and factories equipped with leading equipment and continuously working automated technologies are being built today. Along with the construction of new factories and workshops, the works of reconstruction and renovation of existing factories according to new technologies are envisaged. Therefore, it is an urgent issue to introduce small enterprises and, at the same time, to produce ecologically clean

commodity oil products that can meet world standards that are compatible with today's market economy.

Thanks to the independence of our republic, our markets are joining the world market, opening the way to free trade, a wide range of imported vegetable oils, household and perfume soaps, margarine, mayonnaise products packed with aesthetic taste are being sold in our markets. In terms of quality, our products are superior to those imported from abroad because they are made from pure oils, but in terms of the composition of our products, margarine products are beautifully packaged, and a number of works are being carried out so that their sales do not fall behind foreign products. Including re-equipment of the soap production shop at "Fergana Oil-Oy" XJ, the investment program of the Italian "Massoni" Association has a large place in the production of raw materials imported from abroad:

-after deodorization equipment is installed in every enterprise in the field, the volume of production of edible oil will increase due to the purification of extraction oil, and there will be no need to bring it from abroad;

- starting production of imported equipment and spare parts in our own country;
- to increase the volume of production of soap raw materials in-house;

- organizing the production of bleaching soil in Uzbekistan in the required amount.

At the same time, taking into account the fact that the production of such products as olive oil, casein glue, nutritional alcohol, antifreeze, brake fluid, which are not produced in our republic, but are sold, has been realized, in the future, to start the production of raw materials and products that can replace imports. as a result, it is planned to save up to 40 million dollars a year. One of the main parts of the food industry of the Republic of Uzbekistan is the oil industry. In order to meet the needs of the population of the republic for oil, as well as the need for household and perfume soap, high-quality film-forming substances for washing powders and other products, oil and oil enterprises are intensively expanding their production base.

The process of catalysis has been known since ancient times and was widely used in the preparation of consumer products. This process was used to make cheese by fermenting milk, to make various wines, to make vinegar by fermenting wine, to make dough for bread and other products. Natural enzymes - biocatalysts mainly acted as catalysts. With the large-scale development of industry and the growing need for processing natural products, artificial catalysts were created, invented and studied in various industrial fields. In particular, due to the high catalytic properties of heavy and dispersed metals, they are widely used in oil refining, chemical, food industry and other fields. For this reason, scientific research on the mechanism of effect of metal catalysts on the reaction environment, the invention of new types of them and the possibility of using them in new fields has gained momentum.

At present, salomas is carried out with the presence of heterogeneous powder catalysts made from a mixture of nickel and copper. Similarly, hydrogenation can be carried out with the presence of stable heterogeneous catalysts. Until now, many types of stable heterogeneous catalysts are known, and many theoretical aspects have been studied in this field. Also, the newest branch of the oil-oil industry is the transesterification of oils, which is a very useful catalytic process for obtaining oil

bases for the production of various industrial products. In this case, chemical and physical changes occur with the exchange of radicals of fatty acids contained in triglycerides under the influence of catalysts. The main direction of the technical improvement of the oil-oil production network of the food industry of the Republic of Uzbekistan is to create new technologies, improve the technology of processing non-traditional oilseeds, and increase the capacity of technological equipment.

Summary:

The development of modern refining techniques solves the problems in a complex way, and vegetable oils are purified from accompanying substances, and the resulting products are used as food and for technical purposes. Extracting phosphatides from vegetable oil as food and feed is widely used in industry. Currently, there are methods of extracting valuable products sterol and vitamins from fat. Also, a method for extracting gossypol from cottonseed oil as an independent product has been developed.

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