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IV international scientific conference
Development of science in the XXI century
Dortmund
30-31.03.2023



Development of science in the XXI century

Proceedings of the IV International Scientific and Practical Conference

30-31 March 2023

Dortmund, Germany

2023

UDC 001.1

BBC 1

IV international scientific conference. "Development of science in the XXI century". Dortmund, Germany. 30-31.03.2023. 81 p.

ISBN 978-92-44513-43-9

DOI <https://doi.org/10.5281/zenodo.7798102>

Publisher: «World of Conferences»

Main organization: ESD GROUP

Editor: Tarmo Vesik

Layout: Asko Laar

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The sample of the citation for publication is: *Abbasova Gultekin, Gadjeva Lala, Safarli Gunel THE STUDY OF ENERGY AND GEOMETRIC PARAMETERS OF THE DIPEPTIDE MOLECULE // Development of science in the XXI century. Proceedings of the IV International Scientific and Practical Conference. Dortmund, Germany. 2023. Pp. 12-16. URL: <https://conference-w.com/>*

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Agricultural sciences

EFFECTS OF DIFFERENT SOWING METHODS, FERTILIZER RATES, PINCHING AND HARVEST TIMES ON THE FORMATION OF SYMPODIAL AND MONOPODIAL BRANCHES AND FALLING OF YIELD COMPONENTS IN COTTON CULTIVARS

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Abstract

It is clear from the results of the research that each applied agrotechnical measure has an exceptional role in the formation and preservation of yield components. It is clear from the results of the research that each applied agrotechnical measure has an exceptional role in the formation and preservation of yield components. The falling of yield components was between 25-33,3% in «Ganja-103» and between 25,0-33,3% in «Ganja-110» varieties. The number of yield components in both varieties was higher in the 90x15x1 (74 thousand plants) sowing scheme, N₁₀₀P₅₀K₄₀ fertilizer rate, pinching on August 12 and harvesting on September 25.

The strength of yield and tall branches in cotton varieties has a positive effect on productivity and product quality. In «Ganja-103» variety, 90x10x1 (111 thousand plants) sowing scheme, N₁₂₀P₇₅K₅₀ fertilizer rate, pinching on August 1 and harvesting on September 25, monopodial branches were 1,1 units in the flowering phase and 1,9 units in the ripening phase, while sympodial branches were 6,7 and 11 units. 90x15x1 (74 thousand plants) sowing scheme, N₁₂₀P₇₅K₅₀ fertilizer rate, in the case of pinching on August 12 and harvesting on October 15, those indicators are 1,2; 1,9; 6,9 and 14 units, thereby were slightly higher. In «Ganja-110» variety, 90x15x1 (74 thousand plants) sowing scheme, N₁₀₀P₅₀K₄₀ fertilizer rate, in the option of pinching on August 12 and harvesting on October 15, those indicators were 1,1; 2,1; 6,8 and 13. In «Ganja-110» variety, 90x15x1 (74 thousand plants) sowing scheme, N₁₂₀P₇₅K₅₀ fertilizer rate, in the option of pinching on August 12 and harvesting on October 15, those indicators - 1,2; 2,0; 7,4 and 16 units - were slightly higher. Indicators in «Ganja-110» variety were higher than «Ganja-103».

Keywords: Cotton, Pinching, Harvesting periods, Sowing methods, Fertilizer rates, Sympodial, Monopodial, Yield.

Introduction

Cotton is a natural fibre that grows on a plant. It is both a food and fibre crop, and the plant is a leafy, green shrub related to the hibiscus species of plants. Cotton is grown commercially as an annual shrub and reaches about 1,2 metres in height. Its leaves are broad and heart-shaped with coarse veins and three to five lobes. The plant has many branches, with one main central stem. The cotton plant's taproot reaches a depth of 1,5 metres.

Squares (flower buds) develop several weeks after the plant starts to grow, with flowers appearing a few weeks later. The flowers then drop, leaving a ripening seed pod that becomes the cotton boll (the fruit) after pollination.

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The plant also produces seeds that are contained in small capsules surrounded by fibre in the cotton bolls.

Each cotton boll usually contains 27-45 seeds, and attached to each seed is between 10,000 – 20,000 tiny fibres about 28mm in length.

Cotton fibre is made from cellulose, has a slim coating of wax and is thin and hollow like a straw.

When mature, the crop is picked and ginned, a process that separates the cotton fibre (or lint) from the seed.

Cotton lint makes up about 42% of the picked cotton by weight, and contributes about 85% of the total income from a cotton crop. The other 15% of income comes from cotton seed.

Almost all parts of the cotton plant are used in some way, including the lint, cottonseed, linters, stalks and seed hulls.

Cotton fibre is processed into yarn and fabric, the seeds can be crushed for oil or animal feed, the linters (small fibres left on the seed following the ginning process) are used to make products like cotton balls, and the remaining plant material is either mulched or even composted and reapplied to the soil. Cotton seed plays a very important role during times of drought as a livestock feed [2]

Cotton is a soft, absorbent and breathable natural fibre, making it a perfect material for clothing and undergarments worn close to the skin.

Cotton keeps the body cool in summer and warm in winter because of its good heat conducting properties. Cotton is non-allergenic and, unlike synthetic fibres, is a natural product that contains no chemicals.

Due to its natural whiteness and high rate of absorbency, cotton is one of the best fabrics to dye. Historically, cotton production in Azerbaijan has been crucial to the national economy, accounting for approximately 25% of agricultural revenue. It occurs mainly in the area west of the Caspian Sea [1]

Historical records supported by archaeological excavations have established cotton growing in Azerbaijan to the 5th and 6th centuries AD (2010). During the Soviet era, it was termed as the nation's "white gold" [11].

The cotton industry is considered as one of the important industries in the country. Currently, the country intends to grow the cotton industry further and number of steps have been taken on this direction (2017). President Ilham Aliyev signed a decree on state support of cotton production on September, 2016. The Ministry of Agriculture of Azerbaijan has developed the State Cotton Growing Program 2017-20. According to the program, it is planned to produce cotton on the 120,000-hectare area in 27 districts of the Republic (30 May, 2017).

«The State Program for the development of cotton growing in the Republic of Azerbaijan for 2017-2022» (hereinafter - the State Program) is aimed at strengthening state support for cotton cultivation and solving problems in this field. The President of the Republic of Azerbaijan, Ilham Aliyev, said the following during the all-republic consultations on the development of cotton growing held in Sabirabad on September 17, 2016, in Saatli and Barda in 2017:

«The most dynamic and successful period for the development of cotton-growing is associated with the name of great leader Heydar Aliyev. It was on his initiative and under his direct leadership that cotton-growing developed, 1 million tons of cotton were harvested in Azerbaijan. Cotton growing is a strategically important, labor-intensive and economically efficient production area. There is a great need for this product in the world. Cotton is a product for which there is no need to look for a market. We will restore the glory of cotton farming. This is an area that brings great income for both people and the state.»

The tasks given by the President Ilham Aliyev in the direction of the development of traditional fields in agriculture are being successfully implemented. Currently, stimulating measures are being taken to increase the production of cotton, cocoon, tobacco, viticulture, tea, hazelnut and date production, and farmers in the mentioned areas will have wider opportunities to use concessional loans and agro-leasing services.

Materials and methods

Seydaliyev N.Y. (2016) based on his research states that the cotton plant has a high requirement in water and nutrition [5].

Mammadzade X.Y. (2022). Cotton varieties are cultivated in our country by applying various innovative technologies. Comparative study of sowing with traditional and strip technology, study of productivity and fiber quality indicators are important conditions. To restore the operation and modernization of existing cotton processing factories and provide support to the establishment of new cotton processing factories with advanced equipment and technology; to develop effective measures for pest's management etc., to increase the productivity of this plant and to achieve the improvement of all its structural indicators. Sowing in the row and optimal fertilizer rates give high results in all farms [3].

Seydaliyev N.Y., Khalilov X.Q., Mammadova M.Z. (2022) based on their long-term research, note that in the cotton plant exists high requirements in all agrotechnical measures. However, if the required agrotechnical measures are not implemented on time, the desired goal is not achieved. As a result of the research, it can be noted that in the based on his research «Ganja-110» variety, 90x10x1 (111 thousand plants) sowing scheme, N₁₀₀P₅₀K₄₀ fertilizer rate per hectare, in the option of pinching on August 1 and harvesting on September 25, the net income is 1851 manat and the level of profitability is 211,5%, 90x15x1 (74 thousand of plants) sowing scheme, fertilizer rate of N₁₀₀P₅₀K₄₀ per hectare, in the variant of pinching on August 1 and harvesting on September 25, those indicators were 1628 manat and 186,0%, sowing scheme of 90x10x1 (111 thousand plants), fertilizer rate of N₁₂₀P₇₅K₅₀, pinching on August 12 and 15 In the option collected in October, the net income was 1660 manat and the profitability level was 189,7%, N₁₂₀P₇₅K₅₀ 12 August 15, in the option collected in October, the net income was 1546 manat and the profitability level was 176,6% [7].

Seydaliyev N.Y., Khalilov.X.Q. (2022). High results are achieved when the work done from the beginning of preparation work in the autumn to the harvesting of the crop is carried out consistently in the optimal time according to the agrotechnical calendar plan. The cotton plant is demanding on fertilizers. The coefficient use of nitrogen in the soil by the cotton plant is equal to 50%, phosphorus to 15-20%, potassium to 65-70%. Therefore, it is recommended to give nitrogen and phosphorus fertilizers more than the amount required by the plants. The efficiency of the given fertilizers depends greatly on the correct ratio of nitrogen and phosphorus [6].

Mammadzade X.Y. (2022) as the conclusion of his research noted that the optimization of thinning periods and pinching has different effects on the general development dynamics of cotton varieties. If the time of thinning is delayed, the remain plants in the field absorb nutrients from the soil. In addition, when thinning is carried out in the 5-6 true leaf phase, the root of other plants is slightly damaged, and as a result, the plant develops poorly. Thinning in the 2-3 leaf phase gives better results. Pinching at the optimal time plays an important role in the life of the cotton plant. When pinching is carried out in the first ten days of August, the nutrients are spent not on the growth dynamics of the cotton plant, but on the development of yield components. In case the weight of bolls and the number of yield components increase, which ultimately leads to an increase in productivity and product quality [4].

Sharifa Balchi, Volkan Mehmet Chinar, Aydin Unay (2020) note that due to the fact that the vegetation period of medium-fiber cotton varieties is shorter than other varieties, their genetic characteristics should be taken into account in the period of conducting research on them. Their reaction to light, food, water, temperature, etc. factors should be taken into consideration along with the genetic characteristics. Each variety has certain differences due to its biological and morphological characteristics [8].

Applied sowing methods, optimal rates of mineral fertilizers, pinching and harvesting periods have different effects on the formation of sympodial and monopodial branches in cotton plants.

Results and discussion

As a result of the phenological observations, it can be said that the applied agrotechnical measures had a different effect on the regularity of the formation of branches. As can be seen from

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the table, in «Ganja-103» variety, 90x10x1 (111 thousand plants) sowing scheme, N₁₀₀P₅₀K₄₀ fertilizer rate, in the version where pinching was carried out on August 1 and harvesting on September 25, monopodial branches were 1.1 in the flowering phase and 1.8 in the ripening phase, and sympodial branches were 6.6 and 10 units. 90x15x1 (74,000 plants) sowing scheme, N₁₀₀P₅₀K₄₀ fertilizer rate, in the case of pinching on August 12 and harvesting on October 15, those indicators were 1.2; 1.9; 6.8 and 13.

In «Ganja-103» variety, 90x10x1 (111 thousand plants) sowing scheme, N₁₂₀P₇₅K₅₀ fertilizer rate, pinching on August 1 and harvesting on September 25, monopodial branches were 1.1 units in the flowering phase and 1.9 units in the ripening phase, while sympodial branches were 6.7 and 11 units. . 90x15x1 (74,000 plants) sowing scheme, N₁₂₀P₇₅K₅₀ fertilizer rate, in the case of pinching on August 12 and harvesting on October 15, those indicators were 1.2; 1.9; 6.9 and 14, so that slightly higher.

In «Ganja-110» variety, 90x10x1 (111 thousand plants) sowing scheme, N₁₀₀P₅₀K₄₀ fertilizer rate, pinching on August 1 and harvesting on September 25, monopodial branches were 1,1 units in the flowering phase and 1,8 units in the ripening phase, while sympodial branches were 6,6 and 12 units. 90x15x1 (74 thousand plants) sowing scheme, N₁₀₀P₅₀K₄₀ fertilizer rate, in the case of pinching on August 12 and harvesting on October 15, those indicators were 1,1; 2,1; 6,8 and 13. In «Ganja-110» variety, 90x10x1 (111 thousand plants) sowing scheme, N₁₂₀P₇₅K₅₀ fertilizer rate, pinching on August 1 and harvesting on September 25, monopodial branches were 1,2 units in the flowering phase and 2,1 units in the ripening phase, while sympodial branches were 6,9 and 15. 90x15x1 (74 thousand plants) sowing scheme, N₁₂₀P₇₅K₅₀ fertilizer rate, in the case of pinching on August 12 and harvesting on October 15, those indicators are 1,2; 2,0; 7,4 and 16 units were slightly higher. Indicators in «Ganja-110» variety were higher than «Ganja-103».

The number of yield components varies depending on the biological and morphological characteristics of regionalized cotton varieties. The boll is the fruit of cotton, and in most species, it opens when ripe. The boll is attached to the cotton branch by a stalk, which, like the flower, can be 8 to 10 cm long. The diameter of various cotton bolls can be from 1.9 cm to 5-6 and even 7 cm. The mass of raw cotton in one boll is 0.25-1.1 grams in wild species, and up to 12 grams in cultivated species [10]/

The ripening period of the bolls can vary slightly depending on the early ripening of the species and varieties, even the applied agrotechnics and the weather.

When the falling percentage of yield components is high, this regularity occurs depending on the environmental factors and cultivation of that variety.

In the absence of favorable conditions, shedding of yield components reaches 80-90% and sometimes even 100%. The shedding increases from the inside of the bush to the outside. The farther the fruiting body is from the main stem and higher along its length, the less nutrients and moisture (water) will be available and the more shedding will occur. The regularity of falling of yield components also changes with time. In July and August, falling of yield components is relatively less. It gradually increases in the following months. Fertilizer rates have a certain influence on the total number of yield components and falling, depending on the biological and morphological characteristics of the variety. Depending on the biological and morphological characteristics of the variety, the methods of sowing, fertilizer rates, pinching and harvesting periods have different effects on the falling of yield components. Most of the yield components formed on the bushes are shed for one reason or another, which reduces productivity to a certain extent. Keeping the yield components formed on the plant is a big problem. In this field, multidisciplinary research works are carried out. As can be seen in Table No. 2, depending on the biological and morphological characteristics of the varieties, the effects of sowing methods, fertilizer rates, pinching and harvesting periods on the formation of yield components were different.

The falling of yield components was between 25,0-33,3% in «Ganja-103» variety and between 25,0-33,3% in «Ganja-110» variety. The number of yield components in both varieties was higher in the 90x15x1 (74 thousand plants) sowing scheme, N₁₀₀P₅₀K₄₀ fertilizer rate, pinching on August 12 and harvesting on September 25.

Table 1.

Effects of different sowing methods, fertilizer rates, pinching and harvesting terms on the formation of sympodial and monopodial branches in cotton cultivars

Varieties	Variants				Monopodial		Sympodial	
	Sowing methods	Fertilizer rates	Pinching terms	Harvesting terms	Flowering 14.VII	Ripening 23.VIII	Flowering 14.VII	Ripening 23.VIII
Ganja-103	90x10x1 (111 thousand pieces of plants)	N ₁₀₀ P ₅₀ K ₄₀	01 August	25 September	1,1	1,8	6,6	10
	90x15x1 (74 thousand pieces of plants)	N ₁₀₀ P ₅₀ K ₄₀	01 August	25 September	1,2	1,9	6,8	13
	90x10x1 (111 thousand pieces of plants)	N ₁₂₀ P ₇₅ K ₅₀	12 August	15 October	1,1	2,0	6,7	11
	90x15x1 (74 thousand pieces of plants)	N ₁₂₀ P ₇₅ K ₅₀	12 August	15 October	1,2	1,9	6,9	14
Ganja-110	90x10x1 (111 thousand pieces of plants)	N ₁₀₀ P ₅₀ K ₄₀	01 August	25 September	1,1	2,0	6,6	12
	90x15x1 (74 thousand pieces of plants)	N ₁₀₀ P ₅₀ K ₄₀	01 August	25 September	1,2	1,9	6,9	15
	90x10x1 (111 thousand pieces of plants)	N ₁₂₀ P ₇₅ K ₅₀	12 August	15 October	1,1	2,1	6,8	12
	90x15x1 (74 thousand pieces of plants)	N ₁₂₀ P ₇₅ K ₅₀	12 August	15 October	1,2	2,0	7,4	16

Table 2.

Effects of different sowing methods, fertilizer rates, pinching and harvesting terms on the shedding of yield components in cotton cultivars

Varieties	Sowing methods	Variants			Number of bolls per plant, pieces	Fallen yield components	Falling percent, %
		Fertilizer rates	Pinching terms	Harvesting terms			
Ganja-103	90x10x1 (111 thousand pieces of plants)	N ₁₀₀ P ₅₀ K ₄₀	01 August	25 September	10	4	-
	90x15x1 (74 thousand pieces of plants)	N ₁₀₀ P ₅₀ K ₄₀	01 August	25 September	14	5	25,0
	90x10x1 (111 thousand pieces of plants)	N ₁₂₀ P ₇₅ K ₅₀	12 August	15 October	10	5	25,0
	90x15x1 (74 thousand pieces of plants)	N ₁₂₀ P ₇₅ K ₅₀	12 August	15 October	15	6	33,3
Ganja-110	90x10x1 (111 thousand pieces of plants)	N ₁₀₀ P ₅₀ K ₄₀	01 August	25 September	9	5	25,0
	90x15x1 (74 thousand pieces of plants)	N ₁₀₀ P ₅₀ K ₄₀	01 August	25 September	16	6	33,3
	90x10x1 (111 thousand pieces of plants)	N ₁₂₀ P ₇₅ K ₅₀	12 August	15 October	8	4	25,0
	90x15x1 (74 thousand pieces of plants)	N ₁₂₀ P ₇₅ K ₅₀	12 August	15 October	17	6	33,3

Conclusion

The falling of yield components was between 25,0-33,3% in «Ganja-103» variety and between 25,0-33,3% in «Ganja-110» variety. The number of yields components in both varieties were higher in the 90x15x1 (74 thousand plants) sowing scheme, N₁₀₀P₅₀K₄₀ fertilizer rate, pinching on August 12 and harvesting on September 25.

Sowing scheme 90x10x1 (111 thousand plants) in ««Ganja-103» » variety, fertilizer rate N₁₂₀P₇₅K₅₀, pinching on August 1 and harvesting on September 25, monopodial branches 1,1 in the flowering phase and 1,9 in the ripening phase, and sympodial branches were 6,7 and 11. 90x15x1 (74 thousand plants) sowing scheme, N₁₂₀P₇₅K₅₀, fertilizer rate, in the case of pinching on August 12 and harvesting on October 15, those indicators are 1,2; 1,9; 6,9 and 14, thereby were slightly higher.

In «Ganja-110» variety, 90x15x1 (74 thousand plants) sowing scheme, N₁₀₀P₅₀K₄₀ fertilizer rate, in the option of pinching on August 12 and harvesting on October 15, those indicators were 1,1; 2,1; There were 6,8 and 13 units. In «Ganja-110» variety, 90x15x1 (74,000 plants) sowing scheme, N₁₂₀P₇₅K₅₀, fertilizer rate, in the option of pinching on August 12 and harvesting on October 15, those indicators were 1,2; 2,0; 7,4 and 16, so were slightly higher. Indicators in «Ganja-110» variety were higher than «Ganja-103» variety.

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Biological sciences

THE STUDY OF ENERGY AND GEOMETRIC PARAMETERS OF THE DIPEPTIDE MOLECULE

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ИССЛЕДОВАНИЕ ЭНЕРГЕТИЧЕСКИХ И ГЕОМЕТРИЧЕСКИХ ПАРАМЕТРОВ МОЛЕКУЛЫ ДИПЕПТИДА

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Abstract

One of the most important tasks of biological physics is to establish the spatial structure of organic and bio-organic compounds. Organic substances formed by amino acid chains are defined as peptides, most of which are synthesized by living organisms themselves, and a certain part is obtained with food and medication. It is known that the biological activity of peptides is related to their spatial structure. The study of the properties and characteristics of the biological activity of peptides remains an urgent direction in scientific and medical circles.

Аннотация

Одной из важнейших задач биологической физики является установление пространственного строения органических и биоорганических соединений. Органические вещества, образованные аминокислотными цепочками, определяются как пептиды, большую часть которых живые организмы синтезируют сами, а определённую часть получает с пищей и медикаментозно. Известно, что биологическая активность пептидов связана с их пространственным строением. Изучение свойств и характеристик биологической активности пептидов остается актуальным направлением в научно-медицинских кругах.

Keywords: Peptide, analog, theoretical conformational analysis, spatial structure, conformation, geometric parameters

Ключевые слова: Пептид, аналог, теоретический конформационный анализ, пространственная структура, конформация, геометрические параметры.

Функционирование живых организмов обеспечивается пептидными молекулами, которые осуществляют все регуляторные процессы в клетке. Понять механизмы действия этих

биомолекул можно, если решить задачу их структурной и структурно-функциональной организации. Интерес к изучению пространственной структуры низкомолекулярных пептидных молекул связан с решением проблемы пространственной структуры белков, так как физическая теория и расчетный метод конформационного анализа более простых молекул являются составными частями физической теории и расчетного метода более сложных молекул того же химического типа. Определение структуры и пространственного строения природных пептидов и белков, понимание принципов формирования этой структуры является одной из актуальных тем современной биофизики. В этой работе были исследованы конформационные возможности глипролина и его пространственное строение. Глипролин оказывает нейропретиктивное действие. Исследование проводилось с использованием метода теоретического конформационного анализа, объектом исследования является иммуноактивный дипептид Gly-Pro с цитопротективным действием, глипролин. На основе этого метода и полуэмпирического метода расчётов были определены низкоэнергетические конформации этого дипептида, найдены значения его геометрических и энергетических параметров.

Аминокислотная последовательность, содержащая в себе остаток Gly и остаток Pro является коротким пептидом. Короткие линейные пептиды, как правило, не имеют в растворах фиксированной пространственной структуры. Они существуют в виде набора низкоэнергетических конформаций, который определяется их аминокислотной последовательностью и физико-химическими свойствами растворителя. Стабильность этих структур обусловлена согласованностью всех внутримолекулярных и межмолекулярных взаимодействий в пептидной молекуле. Смещение положения равновесия между немногочисленными предпочтительными структурами пептидов осуществляется по вполне определенному низкоэнергетическому механизму, включающему ряд последовательных конформационных переходов. При взаимодействии биологически активного пептида с рецептором могут происходить конформационные изменения пептидной цепи, которые обеспечивают эффективные взаимодействия активного центра молекулы с лиганд-связывающим центром рецептора. Биологически активная конформация пептидной молекулы, которая реализуется при взаимодействии с рецептором, обычно входит в набор низкоэнергетических структур, существующих в водном растворе. Это в свою очередь представляет отдельный интерес в исследовании пространственного строения и конформационных возможностей пептидных молекул.

Знание пространственной структуры пептидных молекул служит основой для последующего изучения структурно-функциональной организации этих биомолекул. Оно позволяет на основе полученных структур целенаправленно конструировать модели искусственных аналогов природных пептидных молекул. Причем пространственные структуры аналогов отвечают тем или иным низкоэнергетическим, а следовательно, физиологически активным конформационным состояниям природного пептида. Возможности теоретического моделирования искусственных аналогов пептидных молекул позволяют до синтеза и биологических испытаний предсказать физиологически активные молекулы с заранее заданными свойствами.

Как указывалось выше, одним из распространённых теоретических методов исследования пространственной структуры пептидных молекул является теоретический конформационный анализ. При решении задач определения конформационных возможностей пептидов на помощь приходят специально разработанные компьютерные алгоритмы. Такая программа, позволяющая рассчитывать пространственную структуру и конформационные свойства биомолекул, была разработана в БГУ. Составленная на языке Fortran, программа позволяет получать строгие количественные характеристики геометрических и энергетических параметров биомолекул. Программа дает возможность осуществлять поиск стабильных конформаций аминокислот, входящих в пептидные или белковые молекулы, производить точечные замены аминокислот в первичной структуре, строить конформационные карты энергетической поверхности молекул при варьировании двугранных

углов основной или боковых цепей молекул, оценивать контактные расстояния между отдельными атомами. Эта программа использовалась при расчете пространственной структуры нейропептидной молекулы.

Целью настоящей работы является выявление конформационных особенностей строения короткого пептида глицин-пролин, проявляющего нейропротективное действие на моделях повреждения нейронов *in vitro*. Глипролины образуются в организме в результате внутри- и экстраклеточной диссимиляции коллагена, эластина и родственных белков. Известно, что они влияют на систему свертывания крови, модулируют работу иммунной и нервной систем, обладают противовоспалительным действием [1, 2]. Актуальной проблемой остается создание синтетических аналогов глипролинов, которые отличались бы высокой стабильностью и эффективностью действия. В связи с этим, представляется важным проведение структурно-функциональных исследований глипролинов. Уже есть данные о взаимосвязи между структурой коротких глицин- и пролин содержащих пептидов и их биологической активностью [3]. Показано, что эндогенные пептиды Pro-Gly-Pro и *N*-ацетил-Pro-Gly-Pro в условиях окислительного стресса оказывают цитопротективное действие. Установлено, что наличие *C*-концевой последовательности Gly-Pro является необходимым условием для проявления цитопротективного действия коротких синтетических глицин- и пролин содержащих пептидов. Данный *C*-концевой дипептидный участок присутствует у молекулы Semax-Met-Glu-His-Phe-Pro-Gly-Pro. Экспериментальные исследования показали, что Semax является эндогенным регулятором функций центральной нервной системы, обладает адаптивным и ноотропным эффектом. Высокая протеолитическая устойчивость Semax и его фрагментов может лежать в основе пролонгированных эффектов этого пептида [4]. В последние десятилетия уделяется значительное внимание изысканию лекарственных средств анксиолитического действия, лишенных недостатков соединений, используемых в клинической практике. Одним из таких веществ является эндогенный регуляторный аналог тафтсина Selank – Thr-Lys-Pro-Arg-Pro-Gly-Pro, обладающий иммуномодулирующим эффектом [5], а также широким спектром как анксиолитической, так и психостимулирующей активности. Молекула Selank также содержит в конце аминокислотной последовательности важный для ее биологической активности дипептидный фрагмент Gly-Pro. Препараты с аналогичными названиями Semax и Selank являются ноотропными, психостимулирующими, нейрозащитными, антидепрессантами.

Теоретический расчет пространственной структуры молекулы Gly-Pro позволил рассчитать трехмерную структуру биомолекул исходя из известной аминокислотной последовательности [6]. Формы (shapes) основной цепи остатков определялись низкоэнергетическими областями В, R, L и P двугранных углов основной цепи ϕ - ψ для остатка Gly и В, и R форм (shapes) для аминокислоты Pro. Начальные приближения формировались из низкоэнергетических конформаций глицина (R shape – $\phi = -90^\circ$; $\psi = -90^\circ$; B shape – $\phi = -90^\circ$; $\psi = 100^\circ$; L shape – $\phi, \psi = 90^\circ$; P shape основной цепи – $\phi = 90^\circ$; $\psi = -90^\circ$). Для аминокислоты Pro учитывались два положения (B shape – $\psi = 130^\circ$ и R shape – $\psi = -50^\circ$). Для Gly также рассматривались четыре граничных значений углов ϕ - ψ . Всего было составлено 16 различных начальных приближений.

Расчет выполнялся в рамках механической модели молекул с учётом невалентных ($E_{нв}$), электростатических ($E_{эл}$), торсионных взаимодействий ($E_{тор}$) и энергии водородных связей ($E_{вс}$). Невалентные взаимодействия оценивались по потенциалу Леннарда-Джонса с параметрами Скотта и Шерага [7]. Электростатические взаимодействия рассчитывались в монополярном приближении по закону Кулона с использованием зарядов, предложенных в этой же работе. Конформационные возможности дипептида рассчитывались применительно к условиям водного окружения, поэтому величина диэлектрической проницаемости принята равной 10. Водородные связи, которые оценивались по потенциалам типа Морзе, предполагались ослабленными (максимальная энергия образования водородной связи при $r_0 = 1,8 \text{ \AA}$ составляла 1,5 ккал/моль). Торсионные потенциалы и величины барьеров вращения аналогичны величинам,

предложенным в работе [7]. Обозначения и отсчеты углов вращения соответствуют принятой международной номенклатуре [8].

Расчет данной дипептидной молекулы выполнялся на основе стабильных конформаций монопептидов N-ацетил-L-пролина и L-глицина. Для дипептида Gly-Pro, содержащего 27 атомов и 6 переменных двугранных углов, возможны 2 шейпа и 8 форм основной цепи. Развернутый шейп *e* включает четыре формы BB, BR, LB, LR, а свернутый шейп *f* включает формы основной цепи RB, RR, PR, PB.

Учитывая специфику боковых цепей аминокислотных остатков глицина и пролина, важно подчеркнуть, что остаток Gly лишен боковой цепи (в боковой цепи находится один атом водорода), а боковая цепь остатка Pro представляет жестко фиксированное кольцо. Конформационные возможности молекулы дипептида определяются углами только основной цепи остатков глицина и пролина: φ , ψ , ω . Таких двугранных углов в молекуле Gly-Pro шесть. Энергетические и геометрические характеристики всех возможных конформаций молекулы Gly-Pro, представлены в таблицах 1 и 2. В таблице 1 для каждой конформации приведены вклады невалентных, электростатических и торсионных взаимодействий, а также вклады внутримолекулярных монопептидных (E_1 и E_2) и дипептидных взаимодействий (E_{12}). Оптимизированные двугранные углы для Gly (φ_2 , ψ_2 и ω_2) и Pro (ψ_3 , ω_3) представлены для каждой исследуемой пространственной структуры в таблице 2.

Как видно из таблицы 1 основной вклад в энергию молекулы вносят дипептидные взаимодействия, их энергия варьируется от -1.0 до -5.0 ккал/моль. Формы основной цепи шейпа *e* имеют одинаковый развернутый ход основной цепи, при этом боковые цепи Gly и Pro находятся по разные стороны от основной цепи, а формы шейпа *f* имеют одинаковый свернутый ход основной цепи, где боковые цепи аминокислот оказываются сближенными.

Конформации 9–16 соответствуют граничным начальным приближениям остатка Gly: $\varphi = -90^\circ$, $\psi = 0^\circ$; $\varphi = -90^\circ$, $\psi = 180^\circ$; $\varphi = 90^\circ$, $\psi = 0^\circ$; $\varphi = 90^\circ$, $\psi = 180^\circ$. При этом конформации аминокислотного остатка Pro рассматривались в двух формах B, R.

Таблица 1.

Энергетические параметры дипептида Gly-Pro

Конформация		Энергетические вклады (ккал/моль)						
		$E_{нв}$	$E_{эл}$	$E_{тор}$	E_1	E_2	E_{12}	$E_{отн}$
1	BB	4.3	-2.0	0.5	2.0	2.3	-2.0	3.9
2	BR	3.5	-1.0	0.3	2.0	1.5	-1.0	3.0
3	LB	1.3	-1.8	0.8	1.9	2.2	-4.0	1.6
4	LR	0.6	-1.6	0.6	1.8	1.4	-4.0	0.8
5	RB	1.7	-1.8	0.8	1.8	2.2	-4.0	1.8
6	RR	0.2	-1.6	0.7	1.8	1.5	-4.0	0.4
7	PB	1.5	-2.0	0.3	2.3	2.2	-4.0	1.0
8	PR	0.6	-1.9	0.2	2.3	1.4	-4.0	0

Таблица 2.

Геометрические параметры дипептида Gly-Pro

Конформация		Геометрические параметры (град.)						
		ω_1	φ_2	ψ_2	ω_2	ψ_3	ω_3	$E_{отн}$
1	BB	179	-103	119	-179	132	180	3.9
2	BR	179	-104	119	-179	-53	179	3.0
3	LB	179	65	72	177	141	180	1.6
4	LR	180	69	74	177	-54	179	0.8
5	RB	180	-84	-82	175	133	180	1.8
6	RR	180	-71	-76	175	-52	179	0.4
7	PB	179	138	-72	177	142	180	1.0
8	PR	180	137	-72	178	-53	179	0

Расчет обнаружил все возможные конформационные состояния для молекулы дипептида, выявил низкоэнергетические конформации. Из таблицы 1 видно, что относительная энергия конформаций попадает в интервал 0–4 ккал/моль. Самой низкой энергией обладает конформация PR формы основной цепи. Всего 0.4 ккал/моль уступает ей конформация со свернутой формой основной цепи RR. Низкой энергией обладают конформации 10, 12, 14 с граничными значениями углов основной цепи Gly. Следует подчеркнуть, что в низкоэнергетических структурах молекул Semaх и Selank концевой дипептидный участок Gly-Pro так же находится в конформации PR. Можно предположить, что низкоэнергетическая конформация молекулы дипептида ответственна за выполнение определенной биологической функции каждой гептопептидной молекулы и присутствие именно этого дипептидного фрагмента важно и обязательно для активности молекул Semaх и Selank.

Теоретический конформационный анализ дипептида показал, что низкоэнергетические конформационные состояния этих соединений зависят от числа атомов в цикле, взаимного расположением амидных связей и природы N- и C-концевых фрагментов. При этом взаимное расположение амидных связей оказывает существенное влияние на конформационную подвижность исследуемых молекул.

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MODERN INFORMATION TECHNOLOGIES FOR HEADS OF EDUCATIONAL INSTITUTIONS

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СОВРЕМЕННЫЕ ИНФОРМАЦИОННЫЕ ТЕХНОЛОГИИ ДЛЯ РУКОВОДИТЕЛЕЙ ОБРАЗОВАТЕЛЬНЫХ УЧРЕЖДЕНИЙ

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Составная часть информационно-образовательной среды, реализующая функции управления ресурсами образовательной организации и регулирования образовательных отношений, – информационно- управленческая сфера. Выстраивание системы управления, обеспечение функционирования информационно-управленческой сферы возможно через реализацию модели комплексной информатизации общего образования.

Один из вариантов такой модели описана в книге Дылян Г.Д., содержит шесть структурных компонентов-модулей: информационно-методический, образовательный, тиражно-демонстрационный, научно-продуктивный, культурно- просветительский.

Информационно-управленческая сфера современного образовательного учреждения, реализующая организационно-управленческий компонент, должна включать в себя средства поддержки различных видов организационно-управленческой деятельности:

- организацию образовательного процесса, в том числе разработку тарификации, составление расписания и пр.;
- ведение распорядительной, финансовой и отчетной документации;
- создание и сопровождение баз данных об участниках образовательных отношений;
- осуществление внутреннего контроля, диагностики и мониторинга образовательных достижений, обучающихся;
- обеспечение открытости и прозрачности образовательного процесса через сопровождение Web-ресурса;
- методическое сопровождение образовательного процесса, включая ведение электронного журнала и электронных дневников обучающихся;
- работу с библиотечными фондами образовательной организации.

Достижение управляющей системой максимально возможной ее эффективности закономерно зависит от выбора ресурсов и условий, складывающихся в информационно-управленческой сфере, являющейся неотъемлемой частью единой информационно-образовательной среды образовательного учреждения.

При этом не должен оставаться за пределами внимания руководителя вопрос формирования оптимального состава аппаратных средств, используемых для управленческой деятельности, который обеспечивается оптимально необходимым количеством, оптимальными характеристиками и качественным состоянием, достаточной степенью и частотой обновления, оптимальной стоимостью и пр.

Одним из необходимых условий управления образовательным учреждением является его информационное обеспечение, которое подразумевает выбор и соответствующую обработку сведений, характеризующих состояние ее образовательной системы.

Система информационного обеспечения управления образовательным учреждением выполняет ряд важных функций, которые состоят в том, чтобы были удовлетворены потребности руководителей, ее структурных подразделений, преподавателей и обучающихся в получении сведений, необходимых для их деятельности. К таким сведениям можно отнести сведения об обеспеченности средствами образования, о состоянии образовательного пространства в ОУ, о профессиональной квалификации учителей; об образованности учащихся. Система информационного обеспечения управления, по мнению Е.А. Жестковой, предназначена для передачи руководителям, преподавателям, учащимся сведений и документов, которые адресно направлены им; для выявления уровней общеинтеллектуального развития, физического и эмоционально-психического здоровья обучающихся, их потребностей в образовании; для получения учителями информации о тех трудностях, которые испытывают родители в процессе воспитания и обучения своих детей, о доле участия, которое они принимают в этом процессе.

Как показывает практика, определение состава функций правления подобным образом позволило добиться единообразных подходов субъектов правления к отбору и обработке сведений, которые подлежат передаче на все уровни управления. В образовательном учреждении имеется возможность варьировать информационное обеспечение в зависимости от индивидуальных потребностей тех или иных участников образования.

Информационное обеспечение руководителя образовательного учреждения имеет два канала: формализованный, по которому циркулирует информация, которая регламентирована по содержанию, форме и времени представления и обладает достаточной степенью достоверности; стихийный, по которому неуправляемо поступает огромное количество самых разнохарактерных сведений к руководителям, эти сведения не всегда объективно отражают действительное положение вещей (к таким сведениям можно отнести телефонные звонки, обращения в устной форме и др.).

В практике управления пока преобладает второй канал. Необходимо, чтобы руководители образовательных учреждений были обеспечены достоверной, объективной, регламентированной по времени и по форме информацией, то есть, чтобы основная информация поступала по формализованному каналу, а информация, поступающая по стихийному каналу, только ее дополняла.

Целевая единовременная информация, которая подготавливается по заданию руководителя в виде аннотаций, справок, целевых анализов специалистами по тому или иному вопросу, занимает промежуточное положение в системе информационного обеспечения управления образовательными системами. Потребность в них значительно уменьшается при правильной организации информационного обеспечения.

При этом, по мнению авторов Е.А. Жестковой, И.В. Уткиной, с физической структурой транспортировки информации не связана в общем случае логическая структура информационных потоков.

Рассмотрим каналы связи, которые используются в системе мониторинга для осуществления транспортировки информации. К ним можно отнести интернет-каналы, которые используются для передачи в Министерство образования данных от региональной образовательной сети, из городских и районных органов управления образовательными учреждениями, а также из общеобразовательных учебных заведений, связь с которыми по

коммутируемым телефонным каналам (внутриобластным) оказывается недостаточно надежной, слишком дорогостоящей и неустойчивой.

Можно выделить два аспекта, которые способствуют ограничению доступа к информации. Это этический аспект и аспект доверия.

Возможность использовать полученные данные во вред кому бы то ни было – с этим связан этический аспект. В случае, когда в данных обследования содержатся личностные оценки, например, рейтинги педагогов, результаты психодиагностики учащихся, или образовательных учреждений, этот аспект особенно актуален. Эти оценки могут принести значительный ущерб в случае некомпетентного их использования. К таким данным, поэтому должен быть ограничен доступ. Необходимо в рамках мониторинга использовать статистические обобщенные величины, в которых выделены те или иные типологические группы.

Итак, системные изменения, происходящие в государственной политике в отношении образования, нацеленные на усиление консолидации общества, на развитие человеческого потенциала, неизбежно отражаются на уровне требований к качеству образовательных услуг. Чтобы достичь требуемого уровня качества образования, способного удовлетворить многообразные запросы населения, необходимо обеспечить предоставление потребителю равных стартовых возможностей, равной доступности качественных образовательных услуг для каждого их потребителя, эффективное использование ресурсов образовательных организаций. Решению задачи оптимизации ресурсного обеспечения образовательного процесса способствует создание образовательных комплексов, начавшееся и получившее развитие в столичной системе образования.

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**THE MAIN TENDENCIES OF INNOVATIVE DEVELOPMENT IN THE
CONSTRUCTION MATERIALS INDUSTRY OF AZERBAIJAN REPUBLIC**

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Abstract

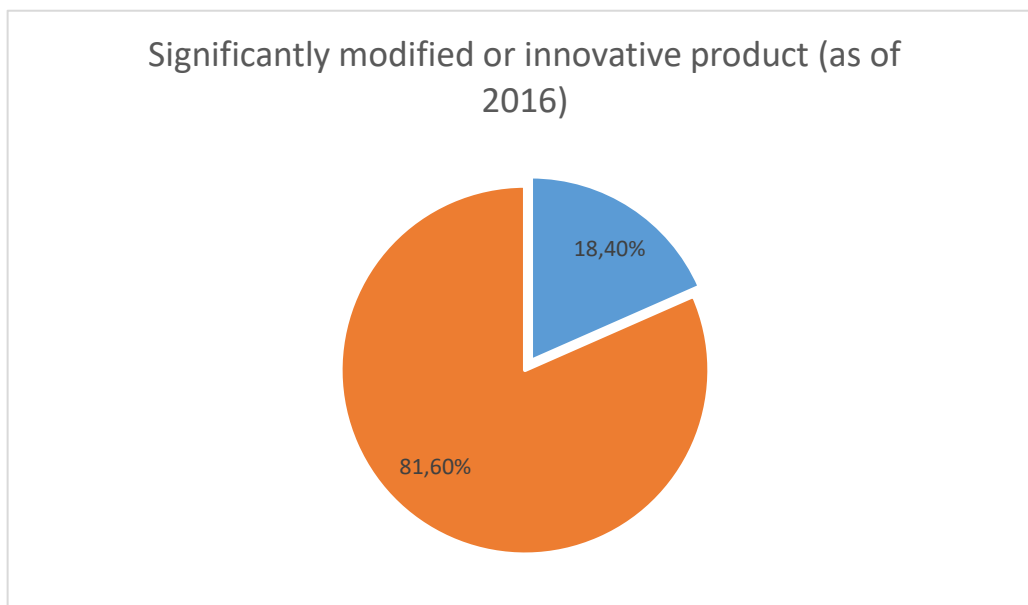
Innovations have a special role in ensuring dynamic development in the construction materials industry companies of Azerbaijan. In the article, the main tendencies of innovative development in the construction materials industry of the Republic of Azerbaijan were investigated. At the same time, as a building materials industry company, "Matanat A" company was analyzed and the main tendencies of innovative development were analyzed.

Keywords: building materials, competitive conditions, manufacturing establishments, incentive, custom tariff.

Introduction

The main tendencies of innovative development in the construction materials industry of Azerbaijan Republic have been fully investigated and analyzed using statistical indicators from the official website of the Statistics Committee. During the analysis, published scientific literature on the subject, normative documents, and official data of the State Statistics Committee were used. The main purpose of this article is to investigate and analyze the main tendencies of innovative development in the building materials industry. For this, researches and analyzes were conducted using the indicators on the website of the Statistics Committee, and the notes on the final results based on the given numbers and indicators were reflected. In the article, the analysis of innovative development in the building materials industry in Azerbaijan, the innovative development tendencies were analyzed in a comparative manner according to the given indicators for years. Along with this, issues of state support for innovative development and reforms in the field and their impact on innovative development were considered.

Analysis of innovative developments in the construction materials industry. The analysis of innovative development in the construction materials industry is of particular importance. For this, we can make a more detailed analysis with the indicators provided by the Statistical Committee of the Republic of Azerbaijan. Let's take a look at the volume of innovation output by level of innovation.



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When we look at the given indicators, the total share of enterprises involved in the production of construction materials, which underwent significant changes or as a result of the introduction of innovations, is 18.40% compared to the innovations spent on the entire industry. Since the peak of innovations in the production of construction materials coincided with 2016, we analyzed those indicators. The share indicator of 18.40% is quite a large number compared to the general industry, which is a clear example of innovations in construction materials production enterprises.

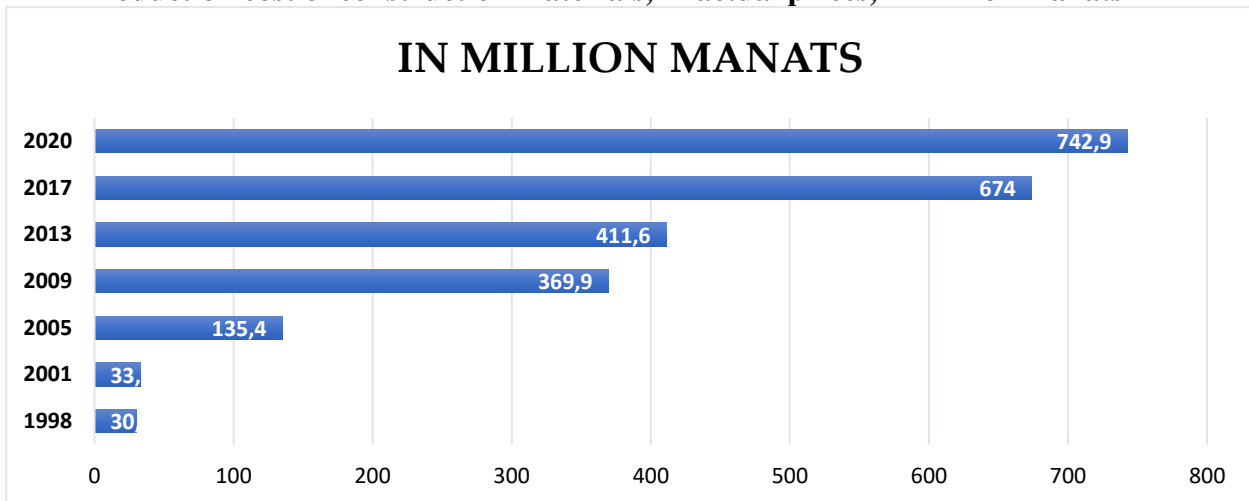
If we look at the costs of technological innovations in the industry according to the types of innovations, we can clearly witness how this process has changed over the years.

By years (thousand manats)	2007th year	2013th year	2016th year	2018th year	2020th year	2021th year
All industry	49620	13877.20	27929	34353.60	35919.80	5848.20
Production of building materials	7.6	9.0	11728.20	3081.60	512.20	340.30
<u>The special part of the production of building materials</u>	<u>0.015%</u>	<u>0.065%</u>	<u>41.99%</u>	<u>8.97%</u>	<u>1.42%</u>	<u>5.81%</u>

If we look at the share of construction materials production in the total expenses by year, we will see that in 2007, the share of construction materials production in the industry was 0.015% of the expenses incurred in the entire industry, in 2013, this figure was 0.065%, and the peak indicator was recorded in 2016. 41.99%. In subsequent years, these figures were 8.97% in 2018, 1.42% in 2020 and partially increased to 5.81% in 2021. 2016 can be seen as the peak limit in the field of construction materials production, as in the previous chart. In general, the field of construction materials production is one of the most important issues among production areas, as can be seen from the figures.

Tendencies in innovative development. In the context of the market economy, development tendencies and innovation application in construction materials production enterprises are important factors. As the production value of construction materials increases in construction materials production enterprises, they are interested in directing a significant part of the income and profit to innovative technological innovations, so that the company's income continues to grow in the long term. If we look at the increase in the cost of production of construction materials in Azerbaijan over the years, this process continues with an increasing trend over the years. This leads to an increase in the country's production potential and a decrease in dependence on the import of construction materials. As much as the construction enterprises, the states also try to provide special assistance, support packages and financial assistance to the construction materials production enterprises as much as possible so that they can finally achieve this growth process. A clear example of Azerbaijan's support for construction materials production enterprises is the increase in the cost of construction materials production over the years. The execution of this process cannot cover a short period of time, and if we look at the graph, we can see that the numbers cover a long period of time.

Production cost of construction materials, in actual prices, in million manats



Azerbaijan Republic's support for construction materials has always been a priority in the state's economic development plan. For this reason, the technological innovations already applied in Azerbaijan are bearing their efficiency, and our state is not satisfied with this, and always provides special support for private enterprises. It further expands this process by developing financial assistance packages.

As example In accordance with the business plan presented by the Ministry of Economy for newly established production enterprises, production is the issuance of an incentive document to legal entities. This process has been applied in Azerbaijan since 2016. Considering the special role of Incentive document, in 2016, it was approved by the Decree No. 745 of the President of the Republic of Azerbaijan dated January 18 with the "Rule of Issuance of Investment Promotion Document". The investment promotion document is issued by the Ministry of Economy to entrepreneurs (legal entities and individual entrepreneurs) who have submitted investment projects that fully meet the criteria specified in Part 3 of the Regulation. The investment promotion document is a document that provides the basis for obtaining the concessions specified in the Tax Code of the Republic of Azerbaijan and the Law "On Customs Tariff". The investment promotion document is based on the criteria to be determined by the Cabinet of Ministers for the area of economic activity in which the investment is carried out, the minimum amount related to the volume of the investment project (hereinafter - the minimum amount) and the administrative territorial units where the investment project will be implemented (currently, work is underway to determine those criteria) is given.

After the criteria are determined, the entrepreneur who wants to carry out investment activities in accordance with them must apply to the Ministry to receive an investment promotion document. (The application must be drawn up in accordance with the form approved by the Board of the Ministry) Along with the application, entrepreneurs must submit an investment project (business plan) that fully meets the criteria to be approved by the Cabinet of Ministers, a document confirming that 10 percent of the minimum amount has been invested in the relevant investment project, and as a taxpayer they must submit a copy of the registration certificate to the Ministry. Before 10 percent of the minimum amount is invested in the relevant investment project, entrepreneurs can apply to the Ministry to determine the compliance of their project with the criteria to be approved.

Applications of entrepreneurs to receive an investment promotion document will be considered by the Ministry within 5 working days, and if the investment project fully meets the criteria to be approved and there are no deficiencies in the submitted documents, the investment promotion document is presented to entrepreneurs.

According to the Law No. 107-VQD dated January 19, 2016 "On Amendments to the Tax Code of the Republic of Azerbaijan" regarding the investment promotion document for entrepreneurs:

- 50% of the income of an individual entrepreneur, and 50% of the profit of a legal entity, is exempt from tax for 7 years from the moment of receiving the investment promotion document;
- On the basis of the confirmation document of the Ministry of Economy, the import of machinery, technological equipment and facilities is exempted from VAT for 7 years;

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- an entrepreneur who has received an investment promotion document is exempt from paying property tax for his property for a period of 7 years from the moment of receiving that document;
- he is exempted from paying land tax for the period of 7 years for the respective lands owned or used from the moment of receiving the investment promotion document.

According to the Law No. 106-VQD dated January 19, 2016 "On Amendments to the Law of the Republic of Azerbaijan "On Customs Tariff", on the investment promotion document by entrepreneurs (legal entities and individual entrepreneurs):

- On the basis of the confirmation document of the Ministry of Economy, the import of machinery, technological equipment and devices is exempted from customs duties for a period of 7 years.

Let us revive this step taken by the state of Azerbaijan to further increase the tendencies of innovative development in the example of Matanat A group of companies as a building materials production enterprise.

Established in 2000 and being the first producer of cement and gypsum-based materials in Azerbaijan, Matanat A company and group has a leading position among local companies in a short period of time. Currently, the company operates in 3 systems and 24 product groups, and is represented by more than 200 trade macros and about 1000 types of goods.

Due to the recent innovations applied by Matanat A" group of companies in the production of gypsum-based products, high-quality construction materials are now offered to consumers in the local market, which leads the consumer to further save costs in the construction process and use environmentally ecologically clean and healthier innovative technology. These types of products include Aghdag product, Matanat A ceramic adhesive, Akdeniz primer and coating fillings, gypsum boards, Rokol industrial decorative paints and emulsions, etc. products can be an example. As these products are manufactured using highly innovative technologies, they are the most supplied building materials not only in the local market but also in the international market. State support played a special role in accelerating the process of realization of innovative development tendencies of Matanat A group of companies. The Matanat A group of companies, which is constantly on the agenda with the products it produces, currently has production plants and representative offices in Azerbaijan and also in a number of leading countries of the world. Having gone beyond the borders of Azerbaijan with the products it produces, it has made its mark in the production of construction materials. As a prime example of state promotion in recent times, by realizing the production of gypsum board boards with Grenzebach technology, it met the demands of consumers for high-quality gypsum boards in the building materials market. In Azerbaijan, there were several small and medium-sized companies engaged in the production of plasterboard boards, which could not meet the demand in the country both in terms of quality and quantity. These factors also led to the increase in the import of plasterboard boards from foreign countries and the emergence of dependence on this product. Recently, in the field of building materials production, stone wool products are produced in a large volume in order to prevent dampness in newly built buildings, as well as to save electricity and natural gas consumption. These products are sent to Azerbaijan from Russia and Ukraine. It is imported from Turkey. The demand for this product is fully covered by imports. Matanat A group of companies decided to organize stone wool production using natural gas for the first time in the world by examining the activities of stone wool producers around the world. The stone wool production process itself requires the construction of a complex of factories consisting of several small factories. Although Azerbaijan has deposits of basalt and dolomite stones, which are the main raw materials, to realize the production of stone wool, organizing this production process and realizing the production of stone wool, which is a high-quality insulation product, requires great experience, skill and professionalism. Matanat A group of companies took advantage of the international experience and put their signature on the production of stone wool with natural gas. Stone wool production enterprises operating in Hungary, Turkey and Russia carry out this process using coal as a type of fuel. Of course, since there is no natural gas reserve in Hungary and Turkey, they preferred stone coal as an alternative. As a result, by producing stone wool with technology that has no analogues in the world, it has set itself the goal not only to meet the demand in the Azerbaijani market, but also to

export to neighboring countries and European countries. Currently, extensive strategic studies are being conducted in this area and plans are being prepared.

Conclusion. In the article, analyzes were conducted based on the official indicators listed on the official website of the statistics committee on the main trends of innovative development in the construction materials industry of the Republic of Azerbaijan, and it was clearly shown how this process changed in which years. In addition, it was investigated how the state support of the Republic of Azerbaijan affects the development trends of innovation. In the article, the innovations and innovative products made by the group of companies "Matanat A" as a visual proof of the main trends of innovative development in the construction materials industry of the Republic of Azerbaijan were highlighted.

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Historical sciences

THE GREAT PATRIOTIC WAR THROUGH ITS HEROES, ON THE EXAMPLE OF CHMUTOV B.D. NATIVE OF KARABALYK DISTRICT OF KOSTANAY REGION

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Abstract

The article reveals the combat and life path of a warrior-veteran of the Great Patriotic War, fellow countryman B.D. Chmutov, who went through the war, returned alive and continued his beloved work. He created a large and valuable photo archive, which he handed over to his close friends, who keep and talk about his merits.

Keywords: Chmutov B.D., hero of the Great Patriotic War, Karabalyk region, countryman.

“Now we can search for the perpetrators of our great losses in the war as much as we like. But all the same, we will not resurrect the millions of dead, missing, silently lying - some in their own, some in a foreign land”.(Chmutov B.D.)

We are all used to hearing and thinking that war is where heroism is manifested and feats are accomplished. But you should not forget that this is a historical event, the awakening of the human spirit, will, and most importantly, this is a national tragedy. War - brings thousands and millions of deaths, tortured in camps and missing. This is the worst thing that can happen in the life of every person and nation. And it is worth considering that in our time there is not a single family from whom the war did not take away or crippled a loved one or relative with bullets. We remember each hero, their exploits, because thanks to them, we see life and can make plans for the future. This war, by right, is sacred.

2023 will be an important date for the Pinzhenin family in particular, and for the Karabalyk region and Kostanay region in general. It is this year that the 100th anniversary of the veteran of the Great Patriotic War, a participant in the Battle of Stalingrad, Boris Dmitrievich Chmutov, will be celebrated. Every city, every village and every family has its own hero. And in this article, I would like to introduce you to one of the heroes of our Karabalyk region, who went through the war and left our family with an invaluable, unique photo archive.

Boris was born on July 28, 1923 in the city of Kurgan (Chelyabinsk region). His mother Chmutova (Poshchuk) Maria Filippovna was born on April 14, 1902 in the city of Kurgan. Later, Maria moved to the Crimea, as evidenced by passport data also in Ukrainian. She worked as a telephonist at the city telephone exchange. It is known that his father's name was Dmitry and he was born in 1898, his father was an employee. There are documents: a marriage certificate of Boris's parents [1, p.1-50]. They got married in 1921 on August 3. In 1930, his father was transferred to Kazakhstan to build a new educational and experimental, now Kustanai, grain farm, where his whole family soon moved. In 1937, after a serious illness, his father died.

In 1932, Boris entered the elementary school named after M. Gorky in the village of Karabalyk. Subsequently, this school became a seven-year school. And then the middle one.

In 1939, by the primary organization of the school, he was accepted into the ranks of the Kom-somol and carried out various public assignments. In January 1941, without interrupting his studies

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at school, he entered the correspondence courses of "photo reporting" organized by the TASS photo chronicle, which, due to the outbreak of the war, were closed. The history of the agency began on September 1, 1904 with the creation of the St. Petersburg Telegraph Agency (SPTA), which became the first unified body in Russia for the dissemination of official information. The agency has changed its name several times. In 1925, TASS received its current name - the Telegraph Agency of the Soviet Union.

“On one of the last days of August 1940, I accompanied my younger brother and his friends to the pioneer camp. It was a quiet, gentle, sunny day. The road went through the bridge of the Toguzak River and the current Guryanovka. My left shoulder was pulled by the strap of a leather case with a Photocor camera. At that time I was already an avid amateur photographer and went with the task of the editors of our school wall newspaper "Excellent" to photograph the line of the pioneer camp. How could I believe, could I think that I would part with our youth forever ?! - from the memoirs of a veteran [2, p.1-50].

In the spring of 1942 he graduated from high school and was mobilized into the Soviet army. The Fedorovsky District Military Commissariat sent him to the Odessa Artillery School named after Frunze, which was then evacuated to the Sverdlovsk Region, the city of Sukholotye. This is a famous school with its own history, traditions, methods of teaching and educating cadets. At one time, it was the only university that trained command personnel for high-capacity artillery. And by 1991, the school, in all respects, was one of the best artillery schools in the Soviet Army. Its graduates have always been the pride of the Soviet Army.

At the end of the summer of 1942, due to the extremely difficult situation in the Stalingrad direction, most of the cadets of the school were sent to defend Stalingrad. “At the front, he was an artillery spotter of the 32nd Guards Artillery Regiment, the 13th Guards Division of General A. Rodimtsev, and the 62nd Army of V.I. Chuikov. The division was formed in November 1941 in the Kursk region on the basis of units of the 3rd Airborne Corps. On September 14, 1942, the 13th Guards Rifle Division was transferred to the 62nd Army (Lieutenant General V.I. Chuikov). At this time, the Nazis captured the central part of Stalingrad. The fighters of A. Rodimtsev crossed on the night from the 14th to the 15th and from the 15th to the 16th of September 1942” [3, p.1-50]. When Stalingrad was about 100-150 km away, their train stopped in the steppe. In a matter of minutes, they unloaded all the equipment and walked to Stalingrad along the scorched Trans-Volga steppe, occasionally making halts. Their topographic department, headed by Sergeant Zorin, was located in the courtyard of a peasant hut, standing on the very edge of a cliff, from where they monitored the movement of the enemy. Boris Dmitrievich served in the regiment from August 1942 to February 1943. He was a participant in the Battle of Stalingrad. Stalingrad was constantly subject to shelling and bombardment from the air. The huge forces of Nazi Germany were thrown here. Not a single street remained in it. On a clear, sunny day on August 23, 1942, a powerful air strike was dealt to Stalingrad. In terms of the number of aircraft involved and the weight of the bombs dropped, it became the most massive Luftwaffe operation since June 22, 1941. How many films, books, poems have been written about this bloody battle, which claimed the lives of many soldiers. I know this personally from the words of the hero himself. To questions about the battle for Stalingrad, he answered briefly - "It was horror!" He will never forget how the Volga River was red from the blood of the killed soldiers and ambulance ships, which took out the wounded. Everyone fought as best they could, not knowing what would happen tomorrow.

During the performance of a combat mission on January 14, 1943, Boris Dmitrievich was seriously wounded, received two wounds, one of them was severe - a wound in the thigh. After recovery, he became an invalid of the 2nd group.

Evacuated to a hospital in Chita [4, pp. 143-156], the chief surgeon at that time was Vasily Arkadyevich Kokhansky. The most light, spacious and comfortable buildings were allocated for the hospital. At first, all the wounded soldiers were admitted to hospital No. 973, which was located on Timiryazev Street, house 25. It was there that all the fighters were brought from the station. And further, taking into account the injury, they were distributed. During the war years, 57920 people passed through the evacuation hospitals of the People's Commissariat of Health in the Chita region,

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of which 46222 were wounded and 11698 were sick. The first flow of the wounded began to arrive in November 1941 - these were participants in the battle near Moscow. Mass loading of evacuation hospitals began in March 1942. There were many wounded with neurosurgical wounds and complications, maxillofacial lesions and others. He stayed in the hospital until the autumn of 1943 and returned to the village of Karabalyk. For his heroism and courage, he was awarded the medal "For Courage" - No. 329779, "For the Defense of Stalingrad", was awarded the badge of the regional committee of the Komsomol of Kazakhstan "Veteran of the Komsomol" - No. 535, as well as the Order of the Patriotic War 1 degree for courage, stamina and courage, shown in the fight against the Nazi invaders № 1991339 [5, p.1-50].

In 1944 he went to work as a projectionist at the club of the plant named after. "25 years of the Kazakh SSR". In 1947 he worked as a draftsman at the same plant in the technical department. In 1950, he went to work at a school and taught drawing in grades 5-6. In 1953, he entered the VGIK at the camera department and in 1954 worked as an assistant to the cameraman M. Berkovich on the set of a film about the development of virgin lands. In 1955, he collaborated in the TASS photo chronicle in the Kostanay region and the regional newspaper "Leninsky Way" (now - "Kostanay News"). In the spring of 1963, he fell seriously ill, and the reason for this was a serious wound at the front, for a long time he was treated at the Central District Hospital of the Karabalyk region until 1966. In the autumn of 1967 he became the head of the photo circle of the secondary school named after M. Gorky. The battle wounds did not leave Boris Dmitrievich, the treatment gave a slight delay, but in the summer of 1970 he was forced to quit for health reasons.

For a long time, before retiring, the front-line soldier worked at the Children's Art School, with which he had creative connections until the end of his life.

Unfortunately, the front-line soldier had no relatives left, he also did not have his own family, so he devoted all his time to creativity and work.

He was a skilled photographer with a tenacious artistic view of the world, able to see and feel the beauty in everything. He carefully kept his archive and signed each picture. Some of the films, judging by the dates, are over 60 years old. Boris Dmitrievich entrusted the photo archive to my grandfather Sergey Dmitrievich Lysochenko, as they had a strong friendship, the friendship of two creative souls, and he knew that they would dispose of it carefully. These photographs caused a storm of emotions among the residents of the area, because in old photographs many people recognize their grandparents and even themselves. For each holiday, solemn events, the newspaper publishes digitized photographs and each block of images can be seen at any moment, plunge and look directly into the past. In 2020, on the year of the 75th anniversary of the Great Victory, we tried to make the photo archive accessible to posterity - this is the best way to honor the memory of a participant in the Great Patriotic War. On these photographic films, I'm not afraid of the word, an entire era is captured. And thanks to Boris Dmitrievich, you and I have the opportunity to look into the past. Each picture keeps the history and unique flavor of Soviet life [6, p.1-50].

At the moment, my grandfather and I, the director of the Children's School of Arts - Lysochenko Sergey Dmitrievich, are implementing a joint project with the regional newspaper "Aina" - "Remember and Save". A stopped moment that can stir up in the souls of fellow countrymen, revive memories of people and days that made up our common past [7, p.1-50]. These projects are necessary for the younger generation. They help to create conditions conducive to the moral, patriotic and spiritual development of the individual and the young citizen. To instill in children and their parents respect for the memory of their ancestors. And the most important thing is to instill a sense of pride in the exploits of the people, to form an interest in the history of their homeland.

I have always been interested in the history of the Soviet period, the history of my native land, but with the advent of the archive and interesting photographs, I felt an even more pronounced interest in this topic and in history in general. Having studied the life of a front-line soldier, I was convinced for the hundredth time that remembering and honoring the memory of heroes is our main task. The memory of the exploits of our heroes is what brings us all together. We must remember this war and what efforts won the victory. Always remember the history of the past, because without it there can be no future!

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CREATIVE HERITAGE OF M.M. BAKHTIN

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Abstract

The article deals with the study of the creative heritage in philosophy and cultural studies of the Russian philosopher, literary critic Mikhail Mikhailovich Bakhtin. The work touches upon the features of the life and creative path of the great philosopher and his intellectual heritage of Russian and world civilization.

Keywords: russian philosophy, literature, laughter culture, carnivalization.

Mikhail Mikhailovich Bakhtin from a young age as a student at the Novorossiysk (Odessa) and St. Petersburg Universities was excited by the interest in studying the cultural understanding of human existence. Or rather, a holistic understanding of different aspects of the culture of language, action, forms of beauty. Mikhail Bakhtin considering human culture, paying attention to such areas as science, art and life, and generally converging to the individual. But seeing the whole in a person, Mikhail Bakhtin notes the artist's mechanical connection between everyday life and creativity. And in truth there is a connection and a transition between the outer and inner worlds. Mikhail Bakhtin also notes that when a person is in art, he is not in life, and vice versa. There is no unity between them and interpenetration of the internal in the unity of the individual [1, p.7]. The philosopher here gives the answer that unity can preserve "the unity of responsibility. This is expressed in the experience and understanding of the artist, as well as those responsible for their art and life. Where there is responsibility, there is also guilt. Art does not carry guilt, but the artist must always be aware of his guilt, and be fully responsible for the creative heritage. One of the main ideas of Mikhail Bakhtin's early work is the relationship between art and reality as a moral reality, that is, in the space of social norms and actions. Because art itself is an area, in the words of M. Bakhtin, boldly self-confident and sensual. And to be responsible for actions, to the person. Mikhail Bakhtin carried this idea throughout his life. This is reflected in the very life of the philosopher. Remaining in the unity of morality and guilt for their creativity against the backdrop of fundamental changes in the foundation of life and moral reality in Soviet Russia. From the Revolution until the death of the author in 1975. During this period, Mikhail Bakhtin faced the horror of tragedies, scrapping. Having gone through, disability, repression, death of friends and like-minded people, camps, exiles and exiles. Having known the "world sorrow" and "great loneliness", Mikhail Bakhtin, remaining, first of all, a Russian philosopher, in his life retained ethics, optimism and creative forces.

In one of his main works on the study and creation of the theory of literature, *The Creativity of François Rabelais and the Folk Culture of the Middle Ages and the Renaissance*, Mikhail Bakhtin writes about the work of the great French writer François Rabelais, who lived at the end of the 15th and the middle of the 16th century. Mikhail Bakhtin characterizes Rabelais as one of the creators of European culture. Extracting from Rabelais some important original terms and concepts. Such as folk culture, laughter culture, carnivalization and others. All of them laid the foundation for the "Bakhtinian" theory of literature and philosophy of culture, which influenced the very understanding of the culture of the past of medieval European civilization, and its subsequent development in Modern. As well as the modern cultural paradigm of Postmodern. Mikhail Bakhtin points out what François Rabelais relied on, where the source is in his art. This is wisdom in the folk element of old provincial

dialects, sayings, proverbs, school farces, from the lips of "fools" and jesters. [2, p.1]. At the same time, having studied the work of the author himself, and the depths of European culture, Mikhail Bakhtin carved out cultural parts. One of the parts that has become an independent idea is the culture of laughter. As a product of folk art. One of the manifestations of this creativity is laughter and its forms, speech and its features. The laughter of the people has its own specific features, they have developed under the influence of the history of the surrounding reality of the kingdoms of Europe. The feudal world of officialdom certainly faced with what seemed to be a frivolous world of laughter culture. It is possible to interpret carnivals, circuses of "freaks", jesters, pantomimes with their laughter, theatrical, stage rites and cults as a protest against the fusion of the feudal-church system.

The laughter world exposed this underside of the medieval period. Despite the fact that the representatives of the laughter world have always been in a "cultural dialogue" with their "patrons" kings and aristocrats. In this peculiar dialogue, the jesters always won, even when the kings took their lives. Were the jesters in their art united in responsibility and guilt? The question must also occupy a place in moral ethics. We can confidently say that the kings stepped over morality and morality by depriving the jester of life. The jester, on the other hand, turns out to be stronger in the end, because he accepted the "Bakhtinian" responsibility for his boldly self-confident act. "Act" and "dialogue" are two more entertaining ideas of Mikhail Bakhtin.

The understanding of laughter and its culture was largely distorted, as the author notes, under the influence of the bourgeois culture of the New Time. Mikhail Bakhtin singled out three forms of laughter culture: 1. Ritual and spectacular (carnival types, areal laughter performances, etc.). 2. Verbal laughter works of various kinds (oral and written in Latin and in various national languages). 3. Various forms and genres of familiar-street speech (cursing, swearing (swearing by the name of God), swearing, folk blazons, and others) [3, p.3].

All forms, genres are intertwined with each other, have a stable tradition, rituals and, most importantly, bearers of a creative act. All of these are parts of a vast culture of laughter that can be distinguished from all over the world. Historians have reconstructed the carnival culture of Europe according to sources, and Mikhail Bakhtin also gives a description of each form. According to Bakhtin, carnival is the totality of all festivities, rituals and a form of the carnival type. Theater historian and doctor of art history Vladimir Kolyazin gave the concept of carnival the following way - in itself a ritual theater created by the people on the street, and carnival is a powerful field of gaming and visual games, is also an integral element of the modern theatrical worldview [4, c. 88]. In addition, ritual festivals and street actions coexist with carnivals. Carnival culture has a church content. Such as the festival of fools, donkey, temple festivals. The latter are associated with fairs, where there is always a varied, rich construction of games, performances and amusements of actors, charlatans, animals and others. Jestors were also present in the ceremonies for the collection of non-torn agricultural products, such as grapes. Also at more serious events: knightly tournaments, transfer of fief rights, knighting. Jestors decorated entertainment events (feasts, parodic numbers).

The dictates of the Catholic Church and Christian morality did not approve of theaters, blasphemy of jesters, the participation of pious representatives of the royal, noble, knightly estates. But at the grassroots level, the carnival, laughter culture was inspired by folk traditions. But the Catholic Church itself, rooted in Western and Central Europe, softened to this culture [5, p.7.]. Features of the carnival are prank, imagery, a combination of church and secular rituals, the authenticity of a person, visionaryism, etc. But the main principle is all participation. The holiday is universal. There was no division into participant and spectator. Carnival is not an invention of the Middle Ages. The roots of laughter were present at the Saturnalia festival in the ancient world. Laughter culture has passed a serious period of development. A language, symbols, costumes were developed, which had its own pathos of attraction for various social groups.

Verbal and laughter works also had their roots, features and development in the whole millennium and up to the present day. One of the oldest works of comic literature is Cyprian's Supper, written by an unknown person in 877, but proposed by the Roman church writer John the Deacon in the grotesque genre. The parody genre occupied a place in literature, popular works of parody of the

church and its dogmas, literature (the liturgy of drunkards, the liturgy of players) were noted [6, p.8]. There were also genres of parodic disputes, dialogues, chronicles, hagiographic stories and others.

A specific form is familiar-areal speech, in the sphere of hierarchies and coercions, representatives of the people formulated a special language and speech that differed in its structure and linguistic features. A new type of communication has emerged to reduce the restriction and reduce the distance between people. For example, in Rus' the address "you" and "you" changes. The areal culture is characterized by a special form of communication and expression - swearing. It is characterized by short, long words and whole sayings. At carnivals and fairs, swear words were distorted in grammar and semantics, and reflected in universality. Swearing and unfulfilled oaths were replaced by swearing, and at the carnival it acquired a comical meaning. It depends on what curses to consider by people and geography. There are some peculiarities in swearing. For example, in Rus' the word "fool" acquired a folk laughter meaning. But as Mikhail Bakhtin pointed out, swearing becomes ambivalent in change. "Fool", on the paradoxical soil of Rus', acquired a fabulous character, at the same time, the foundations of "foolishness" and "bliss" (the concept of Christianity) were added [7, p.42] and even magical power (the word is a conspiracy).

With the development of this form in one of the countries taken, or, in general, two languages appeared. The language of masters and people. With the comprehensive modernization of the laughter culture, the two languages merged into one semantic field of the language. As Mikhail Bakhtin notes during the modernization of the New Time, the culture of laughter (grotesque, parody) frees from all forms of necessity that permeate the prevailing ideas about the world[8, p. 28]. Comic genres open the boundaries of consciousness for post-feudalism and the emergence of modern society, the beginning of laughter and the carnival attitude are noticed. This destroys the foundations, seriousness and rudeness of the world, releases the energies of human souls and opens consciousnesses, provides new opportunities for cultural activity. At the same time, there is also a profound upheaval in the fields of man and his activity. There is a "carnivalization" of consciousness and thinking, what was below and purely limited, carried away more and more masses, the intelligentsia and the elite. By incorporating more and more of the environment into the carnival, a "carnivalization" of the world has been created. Why did this happen? Being determines consciousness, or consciousness being. One way or another, the culture of laughter as the art of action swept through the ages and determined that civilizational landscape of the Modern and Contemporary times.

The cultural approach of Mikhail Bakhtin is interdisciplinary, he was one of the first who epochally combined philosophy and philology into the methodology of the humanities[9, p. 384]. He combined historical poetics, philosophical aesthetics, theoretical poetics, philosophical and cultural anthropology, linguistics, etiology [10, p. 338-340]. For Mikhail Bakhtin, the horizon of sight is inherent in studying the problems of the emergence and functioning of cultural systems and communication with people. And also on the subsequent influence, on the future of the cultural life of entire generations. We can draw many examples through the Bakhtin system in the "language of artistic images" and "memory of the genre" as in our modern life there is a carnival of the collective "Verka Serdushka", Philip Kirkorov and even the individual carnival of Donald Trump.

In a series of works, "The Author and the Hero in Aesthetic Reality" shows the mutual influence of the work and the author. The problem of "dialogue" is one of the connecting concepts in the theory of Mikhail Bakhtin. Cultural communication and comprehension passes through laughter, symbolic reality. The theory of Mikhail Bakhtin is also in dialogue with other great philosophers, philologists of culture, such as Dmitry Likhachev, Alexander Panchenko, Sergei Averintsev, Leonid Karasev and others. Mikhail Bakhtin has a special place in the life of our city. According to the investigation about the organization of the philosophical circle "Resurrection", or according to another version, in the general framework of the "Academic Case", Mikhail Bakhtin was sentenced to five years of strict regime. For health reasons, the sentence was replaced by exile in the city of Kustanai. Lived here in exile 1930-1934 on another date 1931-1936. The world and creative heritage of Mikhail Mikhailovich Bakhtin is unique and all too exciting to talk about it at a short distance, but it requires deep understanding and analysis in the modern way.

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Medical sciences

COMPLICATION OF MRSA BACTERIEMIA AND M/XDR GRAM -NEGATIVE INFECTION

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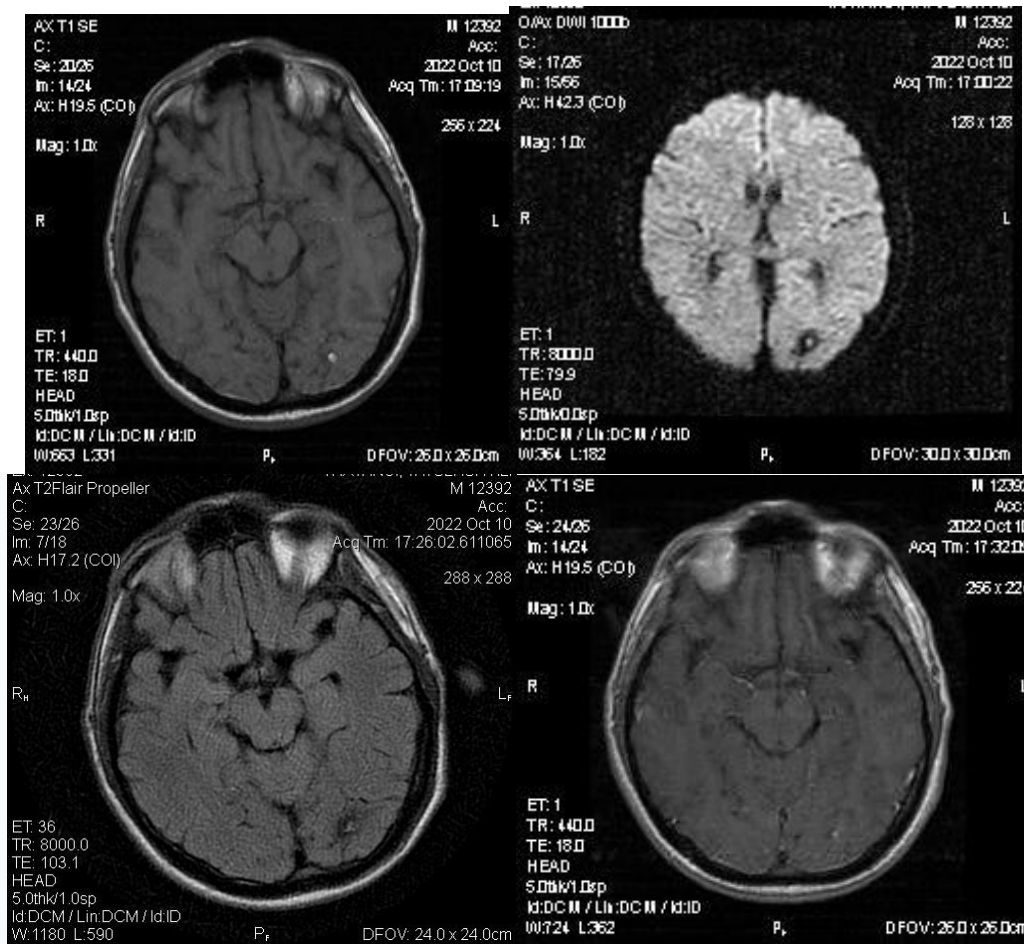
Keywords: Epidural Abscess, ARDS , Endocarditis

Bacteremia caused by *Staphylococcus aureus* is a serious infection associated with high morbidity and mortality and often results in infective endocarditis, abscess of lung, which have a negative impact on patient outcomes. Highly virulent, antibiotic-resistant strains such as methicillin-resistant *S. aureus* (MRSA) are particularly challenging to treat. In *S. aureus*-induced pneumonia, the intense inflammatory response leads to severe lung injury and ARDS . We present a case to highlight the need for prolonged treatment and close monitoring of patients especially with complications associated with *S. aureus* bacteremia. The patient was transferred from the clinic, where he was admitted for paraplegia of the lower extremities, transverse myelitis was diagnosed. He underwent pulse therapy with methylpredizolone, due to the deterioration of his condition, he was transferred to the intensive care unit of our hospital .The patient underwent repeated examinations and was diagnosed with an epidural abscess at the level of the C5-Th1 vertebrae .



Fig.: 1 MRI of the cervical vertebrae. Sagittal section.

In the posterior epidural space at the level of C5-Th1 vertebrae, there is an area of viscous-fluid intensity (an epidural abscess is possible), which causes compression of the posterior cerebrospinal fluid space and the spinal cord in these segments, intervertebral discs are characterized with normal intensity signal (October 10, 2022)



Pict 2 (10 .10 .22) MRI of the brain. Diffusion limited imaging.

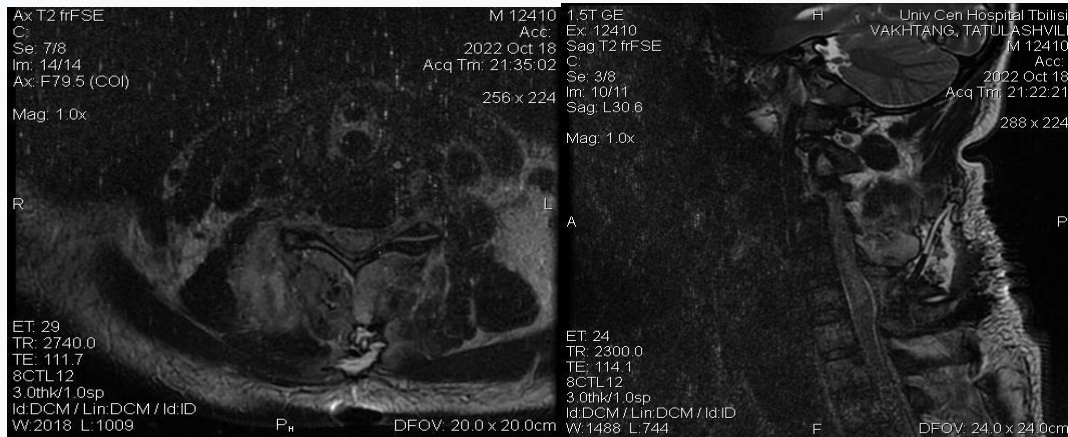
T1 in. T2 weighted image. dT1-weighted image with contrast enhancement. In the left occiput, subcortical Irregular, oval-shaped small high-intensity anomalous focus (SE T1, FLAIR T2) and hypointense (FRFSE T2) with a calcified area. After the introduction of a contrast agent (Magnevist 0.5 mmol/ml, 20 ml IV), the MRI picture of the brain does not change, the inclusion of contrast is not fixed. An MRI revealed an acute microhemorrhagic focus in the left and occipital part of the brain.

Conducted surgical treatment - drainage of the epidural abscess. Bacteriological investigation of the sputum, blood and wound, was revealed Staphylococcus aureus (MRSA). The presence of *S. aureus* in the bloodstream (bacteremia) was lead to the development of sepsis, *S. aureus* sepsis and later endocarditis. Patient is on mechanical ventilation, in coma state, with unstable hemodynamic and under pressors support, fever. CSF results revealed meningitis, and treatment of staphylococcal infection in the blood continues, as well as antibacterial treatment of meningitis.

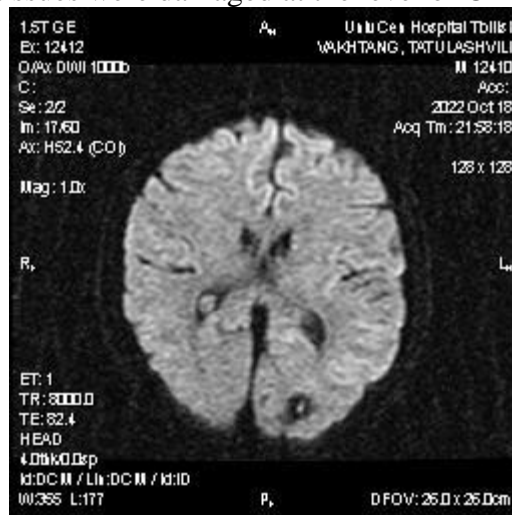
CSF analysis (table 1) revealed high level of protein and cytos

Table 1

CSF 10.10 .22	
CMV IgM	neg
CMV IgG	7.6 iu/ml (pos > 0.5 arbU/ ml)
EBV—VCA IgM	neg
EBV-VCA IgG	96 arbU/ml (pos >5arbU/ml)
CSF (10.10 22)	
Protein	5930 mg/l
Leicocyte	0.512 X 10 ³ /mkl
Erythrocyte	0.001X10 ⁶ /mkl
TC-BF	0.512 X 10 ³ /mkl



On the obtained MRI scans: compared to the previous study (October 10, 2020), viscous fluid is no longer fixed in the posterior epidural space at the level of C5-Th1 vertebrae. A postoperative bone (arcoflavotomy) defect was found in both C6-C7 arches. In the operated area - a drainage tube. Both right paravertebral soft tissues were damaged at the level of C4-C7 vertebrae (10/18/2022)



Pict 4. MRI of the brain

On MRI, the picture is not changed, no acute intracerebral process has been detected . (10/18/2022)

CSF analysis revealed changes (table2)

Table 2

CSF (18.10 .22)	
Protein	10773 mg/l
WbC_BF	0.045 X10 ³ /mkl (n <0.005)
TC-BF	0.045X10 ³ /mkl
glucose	3.89mmol/l
MN%	23%
PMN%	85%

On the axial section in the left occipital lobe, the contours are indistinct, a small hyperdense focus. midstructures are not displaced(09/10/2022)

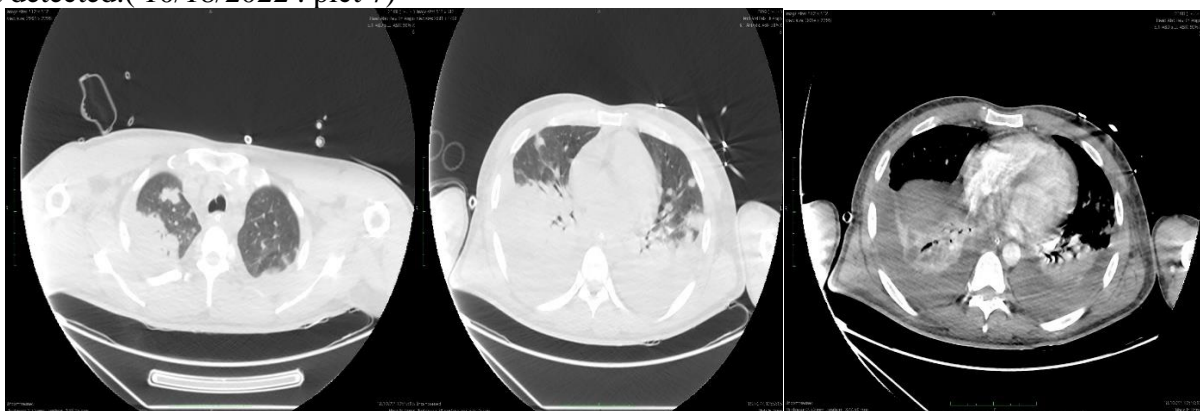


Pict 5. CT scan of the brain.



Pict 6. CT scans of the brain.

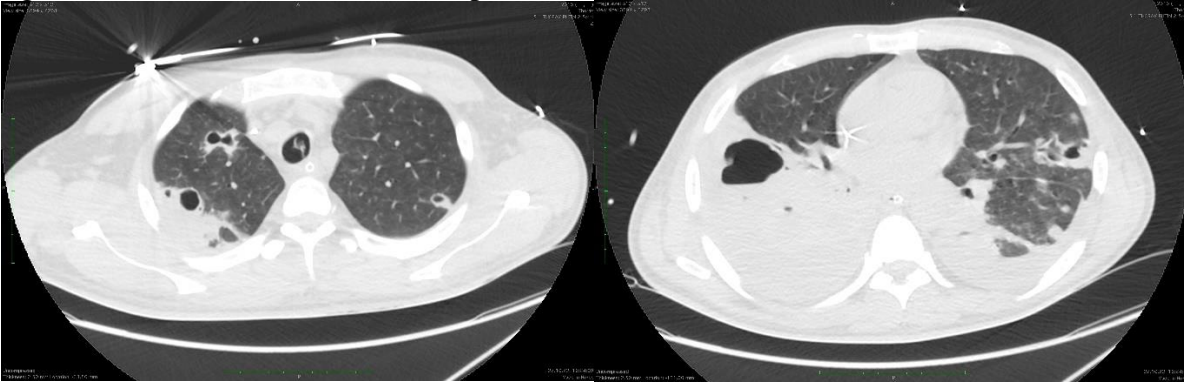
Sputum (17.10) bacteriological analysis revealed Staphylococcus aureus (MRSA). The patient's condition worsened due to the development of severe respiratory distress syndrome . In the lung parenchyma, extensive infiltration changes of the consolidation type with subtotal distribution are detected on both sides, against which there are also different localization foci of density , in the right lower lobe, against the background of consolidation, there are also areas of liquid density. There is free fluid in both pleural cavities, stratification on the right 3.4 cm, on the left 3.7 cm. Free air was not detected.(10/18/2022 . pict 7)



Pict .7 CT scan of the chest, with contrast enhancement

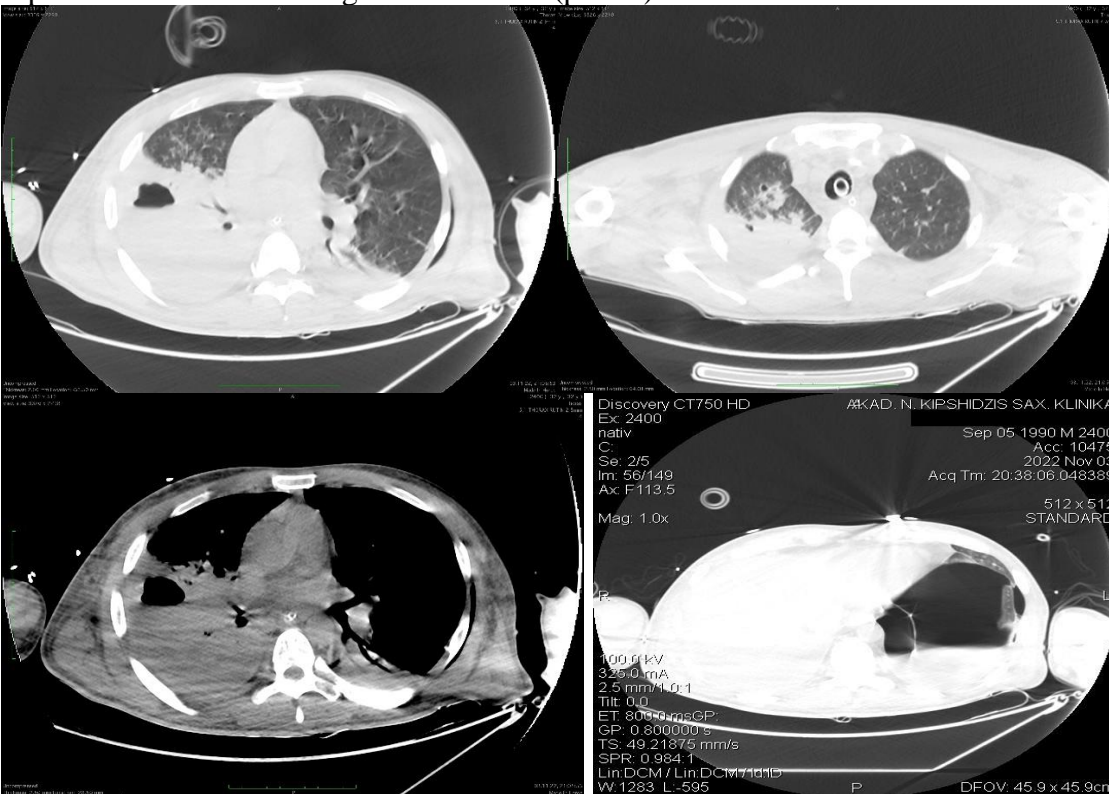
Focal infiltrative changes with a central destruction are observed in the upper lobes of bilateral lungs. In the lower lobes there are extensive consolidated infiltrative changes, on the right in the background there are several areas of low density and a 4.5 cm cavity containing gas and liquid

(horizontal liquid level). In the pleural cavity on both sides of the free fluid, bundle 5.2 cm on the right. 3.2 cm to the left (10/27/2022-pict 8)



Pict.8 CT scan of the chest cavity.

In the left pleural cavity was detected free air. Focal infiltrative changes with central tissue damage are observed in the upper lobes of the lungs. In the lower lobes, consolidated infiltrative changes are expressed with several areas of reduced density, on the right cavitation containing air and liquid, revealed a horizontal level of a liquid . There is free fluid in the pleural cavity on both sides, separation 3.7 cm on the right. 2.5cm –left (pict. 9)



Pict 9. CT chest. .

The pleural cavity of patient was drained . Patient is on mechanical ventilation PaO₂/ FiO₂ < 100 mm.Hg . CSF changes is presented in table. 3

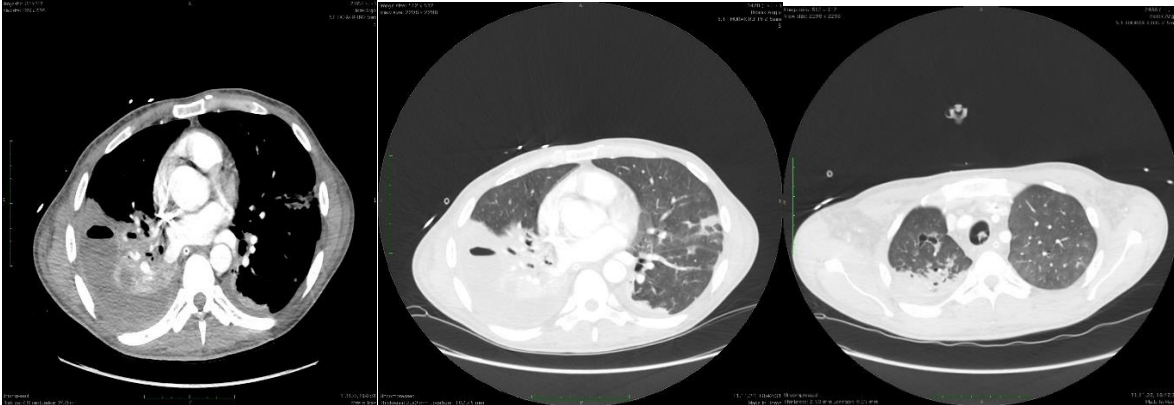
Table 3

CSF (22/10 .22)	
Protein	3098 mg/l (n 200-400 mg/l)
Glucose	2.17 mmol/l (2.22-3.89)
WBC -BF	0.041
RBc --BF	0.001 X10³/mkl
TC--BF	0.041 X10⁴/mkl
PMN %	24.4%
MN %	75.65

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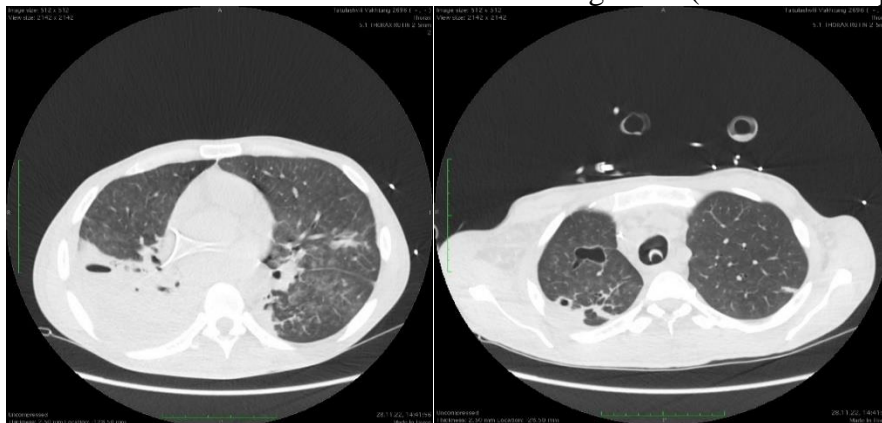
Angiographic examination does not reveal filling defects in the pulmonary trunk and bilateral main, lobar and segmental arteries, there are no reliable signs of thrombosis. Focal infiltrative changes with a central destruction are observed in the upper lobes of the lungs. Consolidated infiltrative changes are determined in the lower lobes, there is free fluid in the pleural cavity on both sides, stratification on the right 2.5 cm. 0.5 cm to the left (11/11/2022—pict 10)

The patient was performed tracheostomy



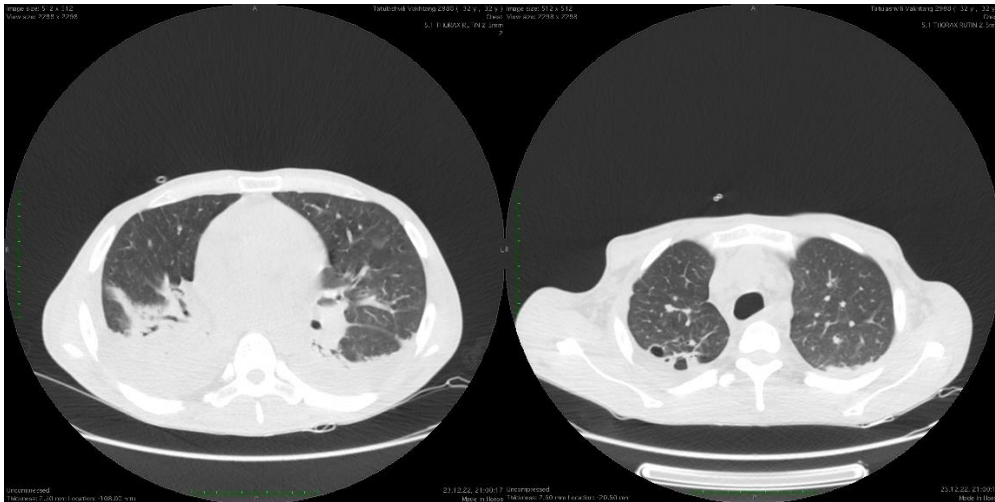
Pic. 10 CT scan of the chest. with contrast enhancement.

A tracheostomy tube is visible in the trachea, In the lungs on both sides, there is a decrease in transparency, against the background of which there are areas of medium- and small-focal infiltration, in the lower lobe on the right there is an extensive consolidation against which there are cavities with an air and small volume of liquid. In the upper lobe there are cavities with air of central localization. On the left, there are consolidation at the level of the basal segments.(28/11/2022—pict.11)



Pict 11. CT scan of the chest.

The decrease in transparency in bilateral lungs is less pronounced. The consolidation in the lower lobe on the right is somewhat reduced, the number of air cavities against the background of the consolidation is reduced, a subpleural air cavity is preserved at its upper edge. Air cavities in the upper lobe are no longer visible, fibrous stretch marks appear instead. There is a small fluid effusion in the bilateral pleural cavity, the maximum separation is 2.2 cm on the right and 1.5 cm on the left, no gas is detected in the bilateral pleural cavity.



Pict 12.CT scan of the chest.

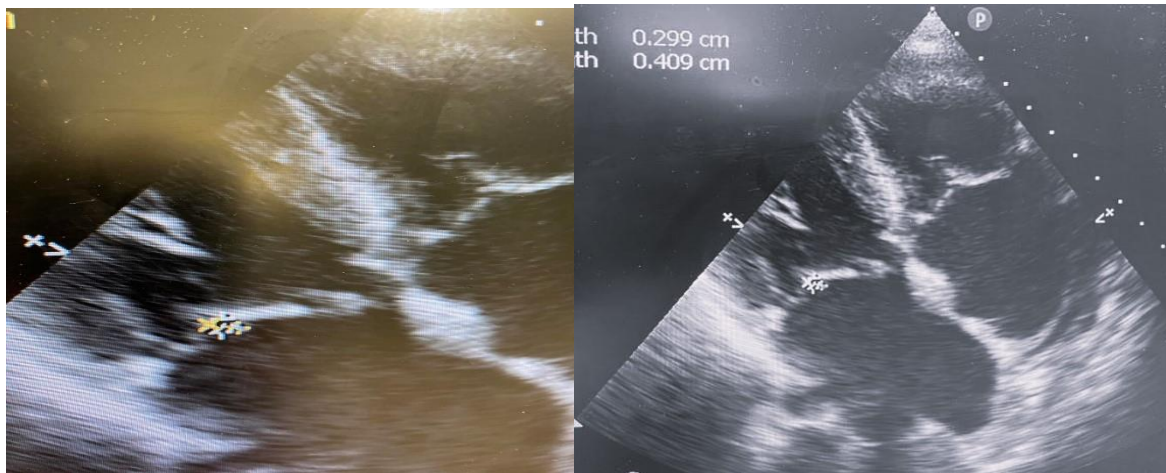
During the course of the disease, different materials were examined, different groups of microbes and different sensitivity to antibiotics were observed (table 4).

Table 4

Bacteriological analyses		Sputum /	Blood/	Wound/
09.10.22		St. aureus(MRSA)/ TEicoplanin,vancomycin ,tigecycline , moxifloxacin	St. aureus(MRSA)/ Vancomycin , clindamycine ,Teicoplanin	St. aureus(MRSA)/ TEicoplanin,vancomycin ,tigecycline , moxifloxacin , erythromycin
17.10.22		St aureus / (TEicoplanin,vancomycin ,tigecycline , moxifloxacin) Candida spp		
24.11.22		KLebsiella pneumonia/ (zavicefta , gentamicin , tigecyclin)	St. aureus/MRSA	
27.11.22		KLebsiella pneumonia		
07.11.22		pseudomonas aeruginosa / (colistin - fosfomycin)		
18.11.22		pseudomonas aeruginosa / (colistin - fosfomycin)		
04.12.22		pseudomonas aeruginosa /		

		(colistin)		
19.12.22		KLebsiella pneumoniae// pseudomonas aeruginosa / colistin,meropenem,tigecyclin		sterile
07.12.22			negative	

Heart valves were evaluated periodically. After one episode of fever, the presence of vegetation on the mitral valve leaflet was revealed.



CDI, *Clostridium difficile* infections presenting with fever, abdominal pain, and diarrhea for several days and was complicated with toxic megacolon, with unstable hemodynamic status, with septic shock.

Table 5

Clostridium defficile	CDH ,A toxin , B toxin
29.11	Negative
20.12	Positive

The scheme of antibacterial treatment implied the impact primarily on the gram-positive flora. Changing the combination of antibiotics occurred as clinical, radiological, or laboratory parameters worsened.

09/10	10/10	13/x	19/x-20/x	23/x-08/XI	09//XI—24/XI	25/XI --06/XII	07/XII-19/XII	19/XII-24/XII	
Pip/tazo	meropenem	meronem	meronem	meronem	meropenem	Tigecyclin	Tigecyclin	Colomycin	
vancomycin	vancomycin	aciklovir	aciklovir	aciklovir	vancomycin	Zavicefta	Vancomycin	Vancomycin	
			vancomycin	Vancomycin	kolomycin	Colomycin	Colomycin	Tigecyclin	
			Colistin	linezolid	fosfomicin	Vancomycin	Meropenem	Meropenem	
			Moxifloxacin	Moxifloxacin	Moxifloxacin	Meropenem	Metronidazol		
			fluconazol	meronem					
			meropenem	Fluconazole					

In severely critically ill patients, empiric antibiotic treatment is usually a combination of antibiotics to increase the likelihood that the bacteria causing the infection will be reliably suppressed and adequate antimicrobial therapy will not be delayed. As already mentioned, inadequate antibiotic therapy is associated with high mortality. Potential causative agents may be enterobacteria, producing ESBL, gram-negative rods resistant to carbapenems (enterobacteria, Pseudomonas, acinetobacteria).

Methicillin-resistant *Staphylococcus aureus* (MRSA), has also been found in blood, in sputum and in the wound. Tigecycline improved the treatment regimen for ESBL and carbapenem-resistant gram-negative rods, as well as for a number of multidrug-resistant gram-positive pathogens (MRSA, VRSA, VRE).

With the appointment of Zavicefta (ceftazidime/avibactam), the regimen was strengthened for ESBL, carbapenem-resistant gram-negative organisms, and to expand coverage of multidrug-resistant strains of Pseudomonas.

A systematic review and meta-analysis of three cohort or case-control studies evaluated patients and found a lower mortality rate with DCT (dual carbapenem therapy) when compared to the control treatment (colistin, tigecycline and aminoglycoside monotherapies, or combined regimens). Synergistic drug therapy combinations that include penicillin plus cephalosporins, as well as carbapenems plus cephalosporins, have been shown to decrease the microbial counts and improve clinical outcomes in infections caused by Gram-positive bacteria. Against multidrug-resistant Gram-negative microorganisms, the use of therapeutic regimens combining beta-lactam/beta-lactam inhibitors with carbapenems has resulted in the resolution of bacterial infections. Antimicrobial resistance associated increase in mortality. Beta-lactams have a safe profile and are bactericidal against most Gram-positive and Gram-negative microorganisms. It is used of dual beta-lactam therapy to overcome multidrug-resistant pathogens, Long-course (>18 days) therapy has the obvious benefit of maximizing the chance of infection resolution.

Patient discharged from hospital, with spontaneous breathing, stable parameters,

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STUDY OF THE FUNGICIDAL ACTION OF 7 NATURAL SUBSTANCES ON CANDIDA ALBICANS COLONIES

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Abstract

In this study, we followed the annihilation of candida with several natural products such as: tinctures of: horsetail, burdock, celandine, mouse tail, as well as the product Biomicin forte A 15, which contains: natural essential oils (it is composed of flower oil of the sun, thyme essential oil - Thymi aetheroleum, clove essential oil - Caryophylli floris aetheroleum).

Keywords: Candida albicans, Candida spp, culture medium, essential oil, tincture, culture plates, gentian violet

Abbreviations: ATCC – Candida albicans standard culture, h – hour, μ L – microlitres, mg – milligrams

Introduction

Recent studies carried out in Europe and the USA highlight the increase in the incidence of nosocomial fungal infections, with a worrying mortality rate, which can reach 40-70% of cases. Fungiemiias due to various species of Candida are ranked 4th, in terms of incidence, in the list of systemic infections associated with medical care, after bacteremias with species from the genera Staphylococcus, Steptococcus, Enterococcus (1, 2). Factors favoring infection include prolonged antibiotic therapy, immunosuppressive therapy, diabetes mellitus, AIDS, use of contraceptives, antitrichomoniasis treatment (3).

Candidiasis is caused by yeasts of the Candida genus, especially Candida albicans (4). At candidiasis the first step is the elimination of predisposing factors. Gentian violet diluted in 1:10.000 aqueous solution, 10% alcohol, can be used for oropharyngeal manifestations; and potassium permanganate solutions of 1/3.000 to 1/5.000. The best therapeutic for all forms is nystatin but it is not very effective when administered orally, unless it is for gastroenterital forms, as the medicine is not absorbed in the intestine. The oral dose can reach up to 1,500,000 daily units, distributed in 3 or 4 doses. To treat vaginitis, nystatin can be used in the form of vaginal cream, as well as vaginal imidazole creams (5), (6), (7), (8), (9).

Infections produced by various species belonging to the Candida genus rank as nosocomial, serious opportunistic infections, characterized by an increased morbidity associated with the hospital environment, translated by the prolongation of the patients' hospitalization period and the increase in the consumption of systemic antifungals (10).

Material and methods

The study took place over 5 days at the analysis laboratory belonging to the Provita 2000 clinic in Constanța between August 22 and August 27, 2022. We sought to find natural substances and, respectively, combinations of substances with the help of which we can obtain a real antifungic effect in the treatment of Candida albicans during the proposed study. In this sense, I used 4 tinctures (horsetail, burdock, celandine, mouse tail) and the product Biomicin forte A15, capsules of 100% natural substances (consisting of sunflower oil, thyme essential oil - Thymi aetheroleum, oil clove essential – Caryophylli floris aetheroleum).

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To highlight the action of natural products on *Candida albicans* cultures, we used Sabouraud's standard culture medium on which we seeded samples of *Candida albicans*, from a calibrated assortment, called ATCC 60193. We introduced the plates to the thermostat, at the standard temperature of 37 °C (11), (12), (13).

Later, for the natural substances that inhibited candida, I took some fragments/parts of the colony from the plates to be examined under the optical microscope. For coloring I used gentian violet 3%. They were fixed with a flame and then washed with tap water.

Staining method

- A smear is made, that is, the biological material is spread in a very thin layer on a glass slide;
- It is fixed in a weak flame (sometimes with methyl alcohol);
- Coloring begins;
- The smear made on the slide from the pathological product and then fixed to the flame is covered with the 3% gentian violet solution (the same is done for the 3% methylene blue solution);
- Then wash with tap water
- After drying, examine under a microscope (10).

Results and discussions

In the initial phase of the experiment I prepared the necessary substances; specifically, I cut the capsule of BIOMYCIN FORTE A15, which is a soft capsule. This capsule of Biomycin forte A15 contains 250 mg of oils. All the investigated tinctures were used in their normal state.

I. I used tinctures of: mouse tail (produced by Hofigal), celandine, burdock and horsetail (from Dacia Plant).

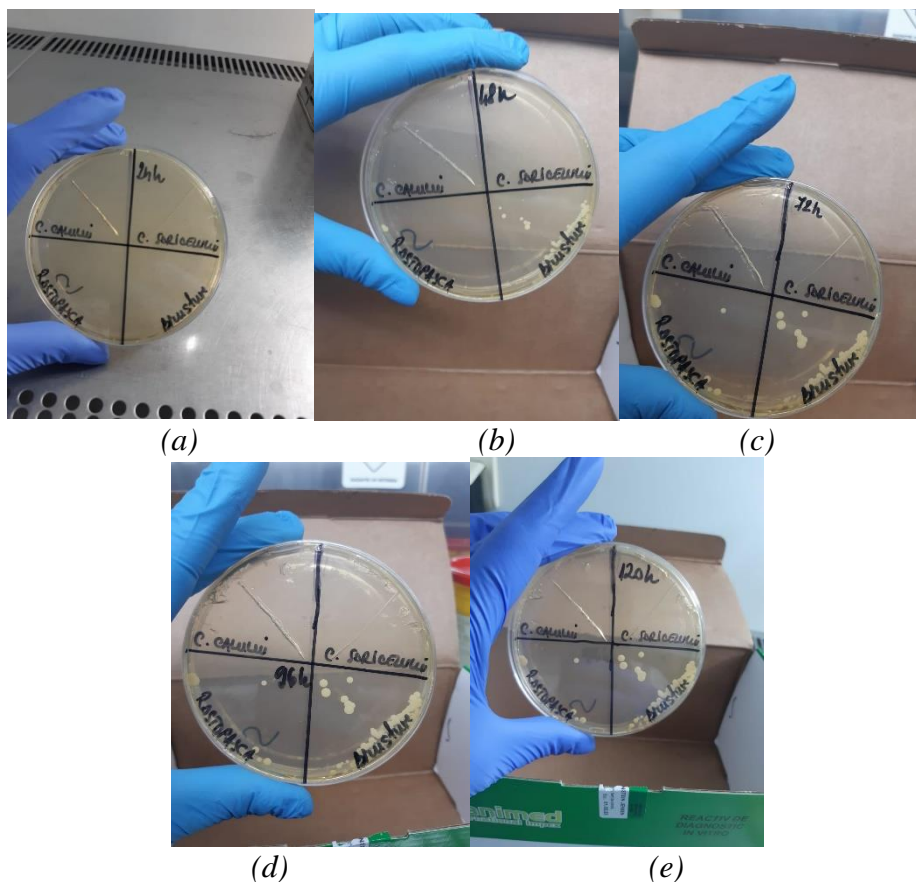


Figure 1 (a, b, c, d, e) Culture plates inoculated with *Candida albicans* on which different tinctures (of horsetail, mouse tail, celandine and burdock) were applied at 24 h, 48 h, , 120 h After 24 h from seeding, horsetail and mouse tail tinctures had antifungal action in the treatment of candida, in contrast to burdock and celandine tinctures.

At 48 h and 72 h after seeding, we found that horsetail and mouse tail tinctures stopped the development of candida; tinctures of celandine and burdock did not have the expected effect.

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In the case of substances with an inhibitory effect, we made slides at 48 h, 72 h and 120 h after sowing; they were later analyzed under an optical microscope with a 100X immersion objective for in-depth viewing. I stained with the indicator known as gentian violet.

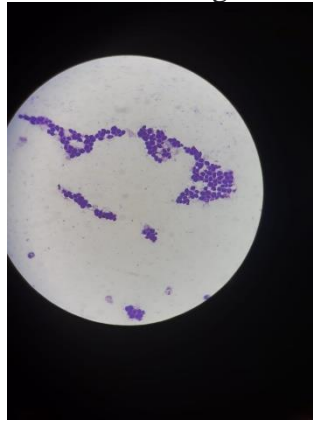
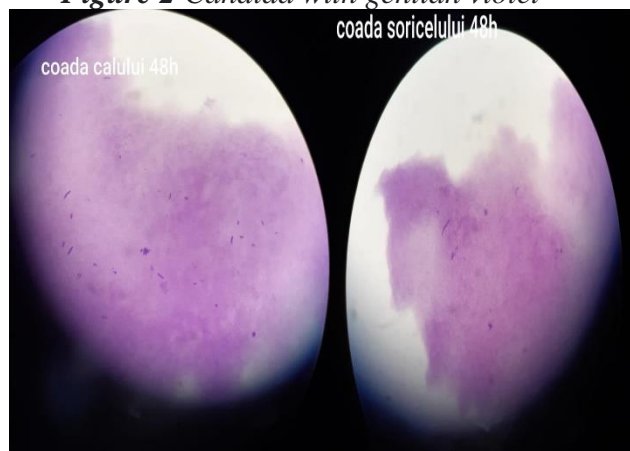
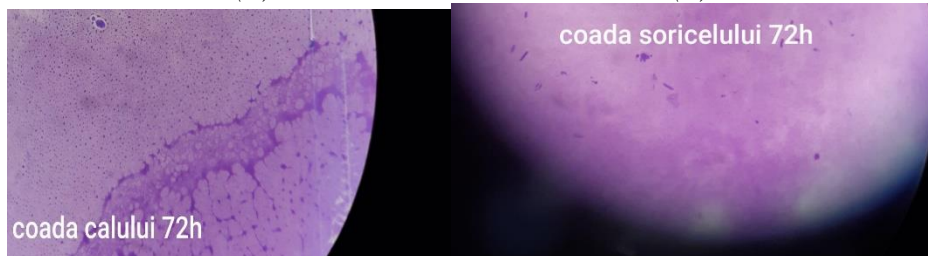


Figure 2 *Candida* with gentian violet



(a)

(b)



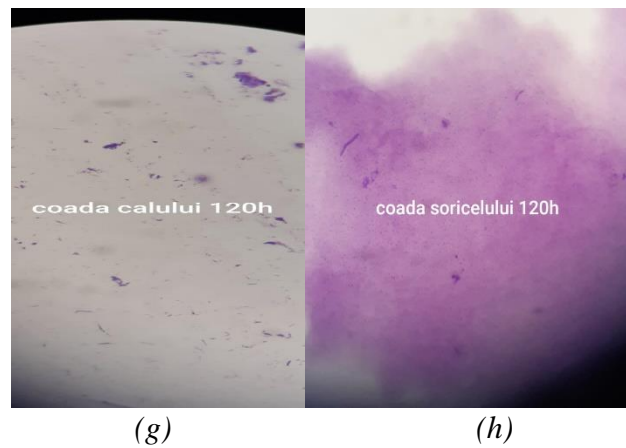
(c)

(d)



(e)

(f)



(g)

(h)

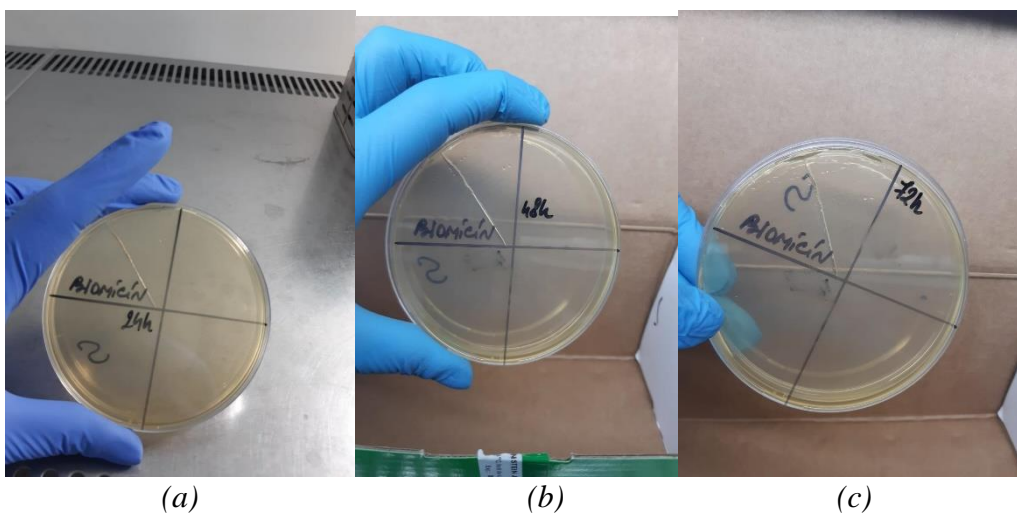
Figure 3 (a, b, c, d, e, f, g, h) Mycelial cultures on which we put horsetail and mousetail tinctures after thermostating for 48 h (a, b), 72 h (c, d), 96 h (e, f) and 120 h (g, h) examined under an optical microscope with a x100 objective

The microscopic appearance of *Candida* cultures was slightly different for the substances in the study: tincture of mouse tail and tincture of horse tail; we visualized filaments characteristic of *Candida albicans* and a mycelial shrinkage in these cases.

During the 5 days of the study, the two tinctures of: horsetail (from Dacia Plant) and mousetail (produced by Hofigal) maintained their antifungal capacity against *Candida albicans*, while the tinctures of: celandine and burdock did not show the inhibitory effect during the entire period of the proposed study.

II. BIOMYCIN FORTE A15, produced by Fares, which is available in the form of capsules; it consists of sunflower oils, thyme essential oil - *Thymi aetheroleum*, clove essential oil - *Caryophylli floris aetheroleum*. This product was used as such; I cut the capsule with oils, than added 3 colonies of *Candida albicans*.

In the first phase I cut the capsule with oils and later added 3 colonies of *Candida albicans*.



(a)

(b)

(c)

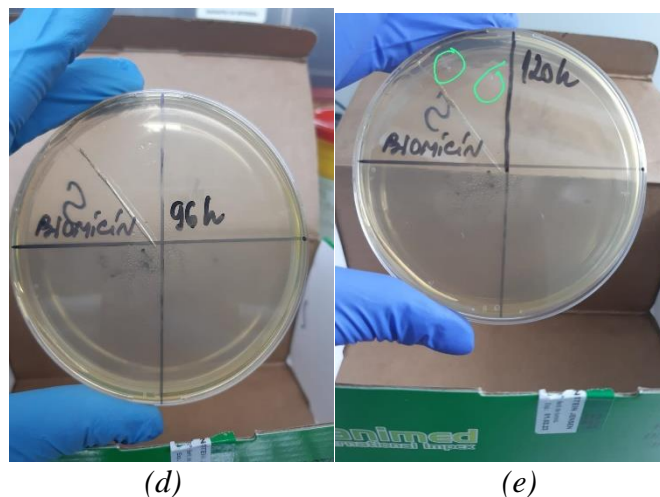


Figure 4 (a, b, c, d, e, f) Culture plates seeded with *Candida albicans* on which we applied BIOMYCIN FORTE A15 at 24 h (a), 48 h (b), 72 h (c), 96 h (d) and 120 h (e)

Candida albicans grew on the plate from the first 24 h after inoculation. Thus, a few colonies (2-3 colonies) appeared on the plate with BIOMYCIN forte A 15 product (14).

During the 5 days of study, *Candida albicans* grew a lot in the presence of the natural product called Biomycin forte A15, which is why we no longer made plates for visualization and analysis under the optical microscope.

Conclusions

During the 5 days of the experiment, we found that the tinctures of horsetail (from Dacia Plant) and mouse tail (produced by Hofigal), unlike the tinctures of:celandine and burdock (from Dacia Plant), inhibited the development of *Candida Albicans* from the first day until the last day of the experiment. BIOMYCIN FORTE A15, produced by Fares (in the form of capsules and consisting of sunflower oils, thyme essential oil - *Thymi aetheroleum*, clove essential oil - *Caryophylli floris aetheroleum*) has no antifungal action in the treatment of candida during the 120 h of research.

Also, on the plates colored with gentian violet and the products that inhibit the development of candida (tinctures of: horse tail (from Dacia Plant) and mouse tail (produced by Hofigal), the decrease in the number of candida mycelia could be observed under the optical microscope.

Consequently, the 2 substances under study: mouse tail tincture (produced by Hofigal Plant) and horse tail tincture (from Dacia Plant) can be successfully used to inhibit the development of *Candida albicans*. We could also use preventively the two medicinal plants (horsetail and mousetail) in the form of tea either separately or together (even alongside plants already known as antifungal) and possibly in concentrated quantities.

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Pedagogical sciences

FORMATION OF BUSINESS COMMUNICATION ETIQUETTE FOR FUTURE TEACHERS

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ФОРМИРОВАНИЕ ЭТИКЕТА ДЕЛОВОГО ОБЩЕНИЯ БУДУЩИХ УЧИТЕЛЕЙ

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Abstract

This article emphasizes the importance of effective communication skills and business communication etiquette for future teachers. It highlights the significance of clear and concise communication, proper grammar and spelling, respecting others' time, using appropriate tone and language, active listening, using technology appropriately, and maintaining confidentiality. The article emphasizes the need for teachers to develop effective communication skills to establish positive relationships with students, colleagues, parents, and other stakeholders. It also highlights the importance of communicating through a variety of mediums in today's digital age and communicating with people from diverse backgrounds and cultures.

Аннотация

В данной статье подчеркивается важность навыков эффективного общения и этикета делового общения для будущих учителей. В ней говорится о важности четкого и лаконичного общения, правильной грамматики и правописания, уважения времени других, использования соответствующего тона и языка, активного слушания, надлежащего использования технологий и соблюдения конфиденциальности. В статье подчеркивается необходимость развития у учителей эффективных коммуникативных навыков для установления позитивных отношений с учащимися, коллегами, родителями и другими заинтересованными сторонами. Авторы также подчеркивают важность общения с помощью различных средств в сегодняшнюю цифровую эпоху и общения с людьми из разных слоев общества и культур.

Keywords: Effective communication, business communication etiquette, future teachers, students, colleagues, parents, verbal communication, nonverbal communication, written communication, positive learning environment, trust, rapport, common goal, misunderstandings, conflicts, collaboration, digital age, communication mediums, sensitivity, awareness, understanding, grammar, spelling, professional image, proofreading, time management, appropriate tone, active listening, technology, confidentiality.

Ключевые слова: Эффективное общение, этикет делового общения, будущие учителя, ученики, коллеги, родители, вербальное общение, невербальное общение, письменное общение, позитивная учебная среда, доверие, взаимопонимание, общая цель, недопонимание, конфликты, сотрудничество, цифровая эпоха, средства коммуникации, чувствительность,

осведомленность, понимание, грамматика, правописание, профессиональный имидж, тайм-менеджмент, соответствующий тон, активное слушание, технология, конфиденциальность.

Эффективное общение необходимо в любой профессии, но особенно в преподавании. Будущему учителю важно выработать хороший этикет делового общения, чтобы установить и поддерживать позитивные отношения со студентами, коллегами, родителями и другими заинтересованными сторонами. Этикет делового общения включает в себя все аспекты общения, от вербального до невербального и письменного. В этой статье мы обсудим важность этикета делового общения для будущих учителей и дадим несколько советов по развитию навыков эффективного общения.

Важность этикета делового общения для будущих учителей

Эффективное общение имеет решающее значение для успеха в любой карьере, и преподавание не является исключением. Учителя должны иметь возможность эффективно общаться со студентами, коллегами и родителями, чтобы создать благоприятную учебную среду, построить доверие и взаимопонимание и убедиться, что все работают для достижения общей цели. Эффективное общение также помогает избежать недопонимания, разрешать конфликты и способствовать сотрудничеству.

Согласно исследованию, опубликованному в *Journal of Educational Research and Practice*, эффективные коммуникативные навыки являются одним из самых важных навыков, которыми должны обладать учителя. Исследование показало, что учителя, которые эффективно общались со своими учениками, с большей вероятностью имели успешный опыт работы в классе и добивались положительных результатов (Wenner, 2017).

В сегодняшнюю цифровую эпоху общение стало более сложным и разнообразным, чем когда-либо прежде. Учителя должны иметь возможность эффективно общаться с помощью различных средств, включая электронную почту, социальные сети и видеоконференции. Кроме того, учителя должны иметь возможность общаться с людьми из разных слоев общества и культур, что требует чуткости, осведомленности и понимания.

Развитие хорошего этикета делового общения

Хорошие коммуникативные навыки необходимы любому учителю, который хочет добиться успеха в своей профессии. Вот несколько советов, как будущему учителю выработать хороший этикет делового общения:

1. Будьте ясны и лаконичны

При общении с другими важно быть ясным и кратким. Избегайте использования технического жаргона или сложного языка, который может запутать вашу аудиторию. Вместо этого сосредоточьтесь на том, чтобы донести свое сообщение таким образом, чтобы его было легко понять. Используйте короткие, простые предложения и избегайте ненужных деталей.

2. Используйте правильную грамматику и правописание

Правильная грамматика и правописание имеют решающее значение для создания профессионального имиджа во всех ваших письменных сообщениях. Пишите ли вы электронные письма, письма или заметки, найдите время, чтобы проверить свои сообщения, чтобы убедиться, что они не содержат ошибок. Плохая грамматика и правописание могут заставить вас выглядеть непрофессионально и подорвать доверие к вам.

3. Уважайте время других

Время — драгоценный товар, и важно уважать чужие графики и приоритеты. Помните о том, сколько времени занимает ваше общение, и старайтесь общаться своевременно и эффективно. Избегайте планирования ненужных встреч или отправки электронных писем, которые можно было бы обработать быстрее.

4. Используйте соответствующий тон и язык

В любом деловом общении важно использовать профессиональный тон и язык. Избегайте использования сленга или неформальной лексики и всегда будьте вежливы и уважительны. Подумайте о тоне вашего сообщения и о том, как оно может быть воспринято вашей аудиторией.

5. Активно слушайте

Эффективное общение — это улица с двусторонним движением, и слушать так же важно, как и говорить. При общении с другими обязательно внимательно слушайте и отвечайте соответствующим образом на их сообщения. Это поможет вам построить более крепкие отношения и понять точку зрения других.

6. Используйте технологии надлежащим образом

Технологии изменили способ нашего общения, но важно использовать их надлежащим образом. Помните о тоне и сообщении ваших электронных писем и текстов и убедитесь, что они подходят для аудитории и цели. Избегайте чрезмерной зависимости от технологий и старайтесь общаться лицом к лицу, когда это возможно.

7. Сохраняйте конфиденциальность

Будущему учителю важно сохранять конфиденциальность при работе с конфиденциальной информацией. Уважайте частную жизнь других и убедитесь, что любая конфиденциальная информация обрабатывается надлежащим образом и безопасно.

Ресурсы для развития хорошего этикета делового общения

Существует множество ресурсов, которые помогут будущим учителям выработать хороший этикет делового общения. Вот несколько предложений:

1. Онлайн-курсы и вебинары. Доступно множество онлайн-курсов и вебинаров, направленных на улучшение навыков делового общения. Такие платформы, как Udemu, Coursera и Skillshare, предлагают курсы по целому ряду тем общения, включая этикет электронной почты, эффективные публичные выступления и разрешение конфликтов.

2. Книги и публикации. Существует множество книг и публикаций, в которых предлагаются советы и стратегии по улучшению навыков делового общения. «Важные беседы» Керри Паттерсона, Джозефа Гренни, Рона Макмиллана и Эла Свитцлера — это популярная книга, посвященная развитию навыков общения в трудных беседах.

3. Практикумы и семинары. Многие организации и профессиональные ассоциации предлагают мастер-классы и семинары, направленные на развитие навыков делового общения. Посещение таких мастер-классов и семинаров может стать отличным способом поучиться у экспертов в этой области и пообщаться с другими профессионалами.

4. Профессиональные наставники. Наличие профессионального наставника может стать отличным способом научиться и улучшить навыки делового общения. Наставники могут предложить рекомендации и отзывы о коммуникативных навыках и дать ценную информацию о профессии.

Заключение

Эффективное общение необходимо будущим учителям для построения успешной карьеры. Развитие хорошего этикета делового общения может помочь учителям установить позитивные отношения, укрепить доверие и способствовать сотрудничеству с учащимися, коллегами, родителями и другими заинтересованными сторонами. Следуя советам, изложенным в этой статье, и используя доступные ресурсы, будущие учителя могут развить коммуникативные навыки, необходимые для успеха в профессии.

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THE ESSENCE OF CLOUD TECHNOLOGIES IN EDUCATION

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СУТНІСТЬ ХМАРНИХ ТЕХНОЛОГІЙ У НАВЧАННІ

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Abstract

The importance of cloud technologies in the professional training of future specialists is studied in the current context. The essence of cloud services in the educational process of higher education institutions is analysed.

Анотація

В умовах сьогодення вивчено значимість хмарних технологій у професійній підготовці майбутніх фахівців. Проведено аналіз сутності хмарних сервісів в освітньому процесі закладів вищої освіти.

Keywords: cloud technologies, educational process, higher education institutions, cloud services, Google.

Ключові слова: хмарні технології, освітній процес, заклади вищої освіти, хмарні сервіси, Google.

Умови сьогодення спонукають заклади вищої освіти вести освітній процес у дистанційному або змішаному форматі навчання, між тим вимога до фахівців нового покоління стає більш вибагливою – економіка країни вимагає фахівців високого рівня. Цю суперечність можливо вирішити лише при використанні у повній мірі «хмарних технологій».

Так, сучасне суспільство знаходиться у розквіті інформатизації. Вживання інформаційних технологій дає можливість у розбіжних галузях науки, техніки, виробництва та освіти розв'язувати задачі як теоретичного і практичного характеру. Та, сьогодні використовується не лише програмне забезпечення комп'ютерів, а все актуальнішим і частішим став ужиток мобільних телефонів, планшетів та інших гаджетів.

Особливості впровадження хмарних сервісів в навчальному процесі досліджували Ю. В. Триус [6], Н. В. Морзе [4], О. О. Гриб'юк [2], Ю. Г. Лотюк [3], Вірджинія Скот (Virginia A. Scott), Джонатан Рошель (Jonathan Rochelle) [1] та ін.

Досліджуючи хмарні сервіси в освіті, О. О. Гриб'юк зазначає, що ««хмара» – це великий пул легко використовуваних і доступних віртуалізованих інформаційних ресурсів (обладнання, платформи розробки та/або сервіси)» [2]. З точки зору Ю. Г. Лотюк, використання хмарних сервісів, дозволяє підвищити якість підготовки студентів закладів вищої освіти та покращити контакт викладача зі студентами [3].

Аналіз наукових досліджень продемонстрував певний досвід вивчень проблем застосування хмарних сервісів саме в навчанні. Тому перед освітянами постає завдання забезпечити освітній процес якісними електронним засобами навчання, але не лише для комп'ютерів, а й для інших сучасних пристроїв, які можна було б використовувати для навчального процесу, будучи в будь-якому іншому місці, чи то в місцях громадських зібрань чи то вдома [5].

Лідерами з надання хмарних послуг для освіти є корпорації Google та Microsoft які безкоштовно пропонують навчальним закладам пакети хмарних сервісів G Suite for Education і Microsoft Office 365. Сутністю із основних пунктів їх використання і є те, що уся створена і

IV international scientific conference. Dortmund. Germany. 30-31.03.2023

завантажена користувачем інформація зберігається на віддаленому сервері, що в свою чергу дає можливість отримати доступ до своїх матеріалів з будь-якої точки, де є підключення до Інтернету, надати іншим користувачам посилання на цей матеріал для перегляду, редагування, або сумісної роботи над ним.

Побіжно, до найнеобхідніших і найкорисніших хмарних сервісів, які варто освоїти в першу чергу, які допомагають отримати продуктивний результат у навчальному процесі, належать:

Google Диск – потрібний для збереження матеріалів онлайн. Це можуть бути документи, конспекти, презентації, підручники, розробки, будь-які матеріали, які ви хочете зберегти для себе і якими, можливо, захочете поділитися з іншими;

YouTube – всесвітньо відомий відеохостинг для розміщення відеоматеріалів. Даний сервіс дозволяє створити власні колекції навчальних відеофільмів. Викладачі можуть знімати і викладати на YouTube власні відеозаняття;

Google Forms – це хмарний сервіс, призначений для отримання зворотного зв'язку. З його допомогою можна створювати онлайн-опитування, тести, інтернет-вікторини, веб-квести тощо;

Google Сайти – професійні сайти, для створення яких не потрібне знання програмування. Є дуже зручний візуальний редактор, який дозволяє додавати текст, зображення і відео, а також об'єкти, що зберігаються на Google Диску: документи, презентації, форми, таблиці, діаграми;

Microsoft Sway – презентації онлайн. Новий цікавий безкоштовний інструмент від Microsoft для створення презентацій і розміщення їх в Інтернеті. Можна використовувати для презентації студентських проектів або створення портфоліо викладача [1].

Отож, використання хмарних технологій дозволяють проводити онлайн-консультації та досить швидко на поставлені запитання отримувати відповіді; здійснювати діагностику знань студентів; проводити анонімне опитування та можливість швидкого опрацювання отриманих даних. Безсумнівна наявність виконання великої кількості видів навчальної роботи, контролю і оцінювання знань студентів (online). Присутність безрекламності, антивірусна, антихакерська безпека та відкритість і доступність освітнього середовища для викладачів і студентів.

Ефективність використання хмарних технологій у навчанні висока.

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Pharmaceutical sciences

INFLUENCE OF MODERN INTERNATIONAL CLINICAL GUIDELINES FOR THE TREATMENT OF ARTERIAL HYPERTENSION ON THE CONSUMPTION OF COMBINED ANTHYPERTENSIVE DRUGS

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ВПЛИВ СУЧАСНИХ МІЖНАРОДНИХ КЛІНІЧНИХ НАСТАНОВ З ЛІКУВАННЯ АРТЕРІАЛЬНОЇ ГІПЕРТЕНЗІЇ НА СПОЖИВАННЯ КОМБІНОВАНИХ АНТИГІПЕРТЕНЗИВНИХ ЛІКАРСЬКИХ ЗАСОБІВ

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Актуальність. В серпні 2018 році Європейське товариство кардіологів оновило свою клінічну настанову з лікування артеріальної гіпертензії. Згідно базової моделі лікування пацієнтів з артеріальною гіпертензією, яка було відображена в цій оновленій клінічній настанові – окрім випадків пацієнтів, які мають низький кардіо-васкулярний ризик, вік більше 80, та ослаблених пацієнтів - рекомендується призначати комбіновані антигіпертензивні лікарські засоби, тобто такі, які мають у своєму складі дві або три діючі речовини. Згідно чинного законодавства України, цю клінічну настанову дозволено до використання в медичній практиці в Україні при виконанні всіх вимог чинного законодавства.

Таким чином актуальним є дослідження питання впливу оновленої клінічної настанови на призначення фахівців охорони здоров'я України, а відповідно – й на структура споживання комбінованих антигіпертензивних лікарських засобів.

Мета – вивчити зміни в структурі споживання комбінованих антигіпертензивних лікарських засобів в Україні в 2018-2020 роках.

Матеріали та методи – об'єктами дослідження були дані роздрібних продажів комбінованих антигіпертензивних лікарських засобів в Україні в 2018-2020 роках. У дослідженні було використано контент-аналіз, методи порівняльного та логічного аналізу.

Результати дослідження.

Основні результати структури споживання комбінованих антигіпертензивних лікарських засобів в Україні в 2018-2020 роках представлені в Таблиці 1.

Таблиця 1.

№	Група комбінацій	АТХ код	Одиниця виміру	РІК		
				2018	2019	2020
1	іАПФ та Діуретики	C09BA	таблетка	323 548 001	334 257 009	325 366 459
2	іАПФ та антагоністи кальцію	C09BB	таблетка	42 240 680	48 330 118	46 763 064
3	БРА та діуретики	C09DA	таблетка	94 858 456	95 582 426	96 784 366
4	БРА та антагоністи кальцію	C09DB	таблетка	29 147 534	32 117 530	35 509 272

Аналізуючи структуру споживання комбінованих антигіпертензивних лікарських засобів, встановлено що в 2019 році підвищення споживання комбінованих лікарських засобів групи «іАПФ та діуретики) зафіксовано на 3,3%, в той час як групи «іАПФ та антагоністи

кальцію» на рівні +14,41%. В тому ж 2019 році споживання комбінованих антигіпертензивних лікарських засобів групи «БРА та діуретики» зросло тільки на 0,76%; а споживання комбінованих лікарських засобів групи «БРА та антагоністи кальцію» на 10,18%.

В 2020 році споживання комбінованих ЛЗ групи «іАПФ та діуретики» та «іАПФ та антагоністи кальцію» знизилось на -2,65% та 3,24% відповідно, а споживання комбінованих лікарських засобів групи «БРА та діуретики» й «БРА та антагоністи кальцію» збільшилось на 1,25% та 10,56% відповідно.

Висновки. Опубліковані оновлені клінічні настанови з лікування артеріальної гіпертензії мали позитивний вплив на споживання комбінованих антигіпертензивних лікарських засобів. Водночас необхідно провести додаткові порівняльні дослідження споживання однокомпонентних та комбінованих антигіпертензивних лікарських засобів з метою визначення та розробки додаткових кроків стимулювання та підвищення використання комбінованих антигіпертензивних лікарських засобів в повсякденній медичній практиці.

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Philological sciences

ADAPTATION OF GERMAN WORDS IN UZBEK LANGUAGE

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АДАПТАЦИЯ НЕМЕЦКИХ СЛОВ В УЗБЕКСКОМ ЯЗЫКЕ

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Abstract

The article examines the manifestation of the interlinguistic function of the language, which participates in the adaptation of German words to the Uzbek language through the mediation of the Russian language. Among the types of language changes that have been reflected in the Uzbek language, there are contact and non-contact, unidirectional and mutual.

Аннотация

В статье рассматривается проявление интерлингвистической функции языка, которая участвует в адаптации немецких слов в узбекском языке через посредство русского языка. Среди типов языковых изменений, нашедших отражение в узбекском языке, выделяются контактные и неконтактные, однонаправленные и взаимные.

Keywords: German language, loanwords, Uzbek language.

Ключевые слова: немецкий язык, заимствования, узбекский язык.

Важным фактором языковой эволюции являются языковые контакты. Ни один язык не обходится без заимствований, поскольку при контактировании народов происходит проникновение языковых фактов из одного языка в другой, и это неизбежно. Особенно ярко это проявляется при взаимодействии лексических систем. В этом случае ученые обращают внимание на одну из важных функций языка – интерлингвистическую [Линь 2020: 730-736], с помощью которой идет естественное взаимообогащение языков. Интерлингвистическая функция языка находит отражение в воздействии одной языковой системы на другую и проявляет сAdaptation ебя в процессе интеграции.

Заимствованные слова «приспосабливаются» принимающим языком к фонетическому облику, семантически и словообразовательно преобразуются, расширяя тем самым словообразовательные ресурсы. Люди слышат чужую речь и пытаются осознать ее на фоне своего строя языка. Следует заметить, что в этом случае наблюдается процесс однонаправленных языковых изменений.

Языковые контакты происходят обычно в определенных географических ареалах и обусловлены этническими, историческими и социальными факторами, в частности, экономическими. Результатом языковых контактов являются процессы интерференции (наложение одних понятий на другие, обозначающие одно и то же, например, менеджмент – управление) и конвергенции (уподобление звуков одного языка другому).

Будучи участником Интернациональной Азиатской школы-семинар «Язык, культура и история», проходившей на базе Самаркандского государственного университета имени Шарофа Рашидова (март 2023 года), мы убедились, что языковая среда в Узбекистане представляет собой межкультурное и межъязыковое пространство, в котором взаимодействуют представители различных языков и культур. Обращает на себя внимание русская пресса, служащая посредником проникновения немецких заимствований в узбекский язык. Так, в узбекской газете на русском языке («Самаркандский Вестник» от 15 февраля 2023 года) в колонке «В помощь предпринимателям» размещена статья под названием «Режим «Форс-мажор» для бизнеса». В этой статье употребляется слово «штраф», которое было заимствовано русским языком из немецкого языка еще в эпоху Петра I – Strafe в значении «денежный штраф, наказание».

В лексикографических источниках, например, в словарях Н.М. Шанского Г.А. Крылова отмечаются активно употребляемые в русском языке существительные «штрафник», «штрафование», глаголы «штрафовать», «оштрафовать» (разговорный вариант «штрафануть»), прилагательное «штрафной», причастие «штрафовавший», «штрафованный», «оштрафованный», сложное слово «трафбат» (штрафной батальон), которые по своему происхождению восходят к слову ШТРАФ.

Из немецкого языка в русский язык вошли широко используемые в узбекском языке экономические термины типа «бухгалтерия» (Buchhalterei) в значении «учёт хозяйственных операций». Этот термин состоит из двух корней: Buch – книга, halten – держать; слово Krach (производное от krachen – «грохать, шуметь») в значении «банкротство, треск, шум», заимствованное русским языком во второй половине XIX века.

В результате взаимодействия немецкого и русского языков особо выделяются контактные и неконтактные, однонаправленные и взаимные типы языковых изменений, нашедших отражение в узбекском языке.

Контактному взаимодействию русского и узбекского языков способствовал существовавший в свое время единый культурно географический ареал (некогда эти страны являли собой оно территориальное пространство, между ними не было границ), что способствовало успешному процессу контактирования соседствующих языков. Русский и немецкий, немецкий и узбекский языки – это неконтактный тип взаимодействия.

Таким образом, обогащение узбекского словаря во многом обязано немецким словам, адаптированных в свое время русским языком, который был некогда широко употребителен на территории современного Узбекистана и способствовал активному вхождению слов, немецких по происхождению, в активный состав этого тюркского языка, но уже в собственной фонетической огласовке.

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ARTISTIC SKILLS IN ABAY TRANSLATIONS

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АБАЙ АУДАРМАЛАРЫНДАҒЫ КӨРКЕМ ШЕБЕРЛІК

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Abstract

This study discusses some points regarding the mastery of the translations of Abay Kunanbayuly by some scientists and researchers of the Abay scholars and from the standpoint of modern science.

Аннотация

Осы зерттеуде Абай Құнанбайұлының аудармаларының көркем шеберлігіне байланысты абайтанушы ғалымдар мен зерттеушілердің негізгі ой-пікірлері мен қазіргі әдебиеттанудағы үрдістер тұрғысынан сараланады.

Keywords: Abai Kunanbayuly, translation, artistic skill, Yu. Lermontov.

Кілтгі сөздер: Абай Құнанбайұлы, аударма, көркем шеберлік, Лермонтов.

Статья написана в рамках научного проекта «AP09259039 – поэтологический тезаурус стихов Абая» финансируемого в рамках гранта МОН РК

Абай Құнанбайұлы шығармашылық мұраларының ішінде аудармаларының алар орны ерекше және олар біршама жүйелі негізде зерттелген тақырыптардың қатарына жатады. Зерттеу тақырыбының жанжақты зерттелуінде советтік кезең идеологиясының талаптарына сай келуімен қатар, оның сол кезеңдегі өзектілігімен де айқындағандай болды. Ақын өмірі мен шығармашылығының ең алғашқы зерттеушісі Ә. Бөкейханов: «Особенно любил Абай сочинения Лермонтова, из которых любил делать переводы; между прочим, Абай перевел превосходными киргизскими стихами «Думу», «Кинжал», «Парус», «Молитву» и др. Абай перевел много басен Крылова, находя, что для киргиза наиболее понятны басни и полезные нравоучения. Абаем переведен на киргизский язык «Евгений Онегин»; особенной в степи популярностью пользуется «Письмо Татьяны», для которого тот же переводчик сочинил мотив. В 1899 году в Коконской волости киргизский певец Адылхан предложил нам послушать «Письмо Татьяны» под аккомпанемент его скрипки. На наше удивление, откуда от знает «Письмо Татьяны», Адылхан, не без гордости указав на себя, пояснил, что у русских был такой же, как он, певец – «ақын» Пушкин, который воспел, как Татьяна «сұлу» (красавица) полюбила джигита Онегина, которому и написала письмо. В тот же вечер Адылхан, знающий много оригинальных стихов Абая, спел нам несколько его переводов из Лермонтова, пояснив при этом, что Лермонтов был недоволен жизнью, а Пушкин относился к ней, как мудрец. Впоследствии автору этих строк пришлось убедиться в том, что в Киргизской степи в разных уездах «ақыны» знали и распевали на балалайке (домбре) переводы Абая из Пушкина и Лермонтова» [1], деп аудармалары жайында, қысқа Некролог аясының өзінде толыққанды

мағұлымат береді. Аудармалар жайлы А. Байтұрсынұлы, М. Дулатұлы, М. Әуезов, Қ. Жұмалиев, З. Ахметов, А. Құспанов, Г. Бельгер, Н. Габдуллин, С. Абдрахманов және тағы басқа көптеген ғалымдар мен зерттеушілер зерттеушілер өздерінің келелі ой-пікірлеріне білдіргенә белгілі. Аталған зерттеуледің ішінде Заки Ахметов «Лермотов және Абай» еңбегі елеулі үлес қосқан, ең ірі еңбек екені сөзсіз. Дегенде, ол зерттеу совет кезеңінде жасағанын да ескеру керек. Сонымен қарат, Н. Габдуллин мен С. Абдрахманов сынды ғалымдар Абайдың жекелеген аудармаларына аударма ретінде емес, шығармашылық жауап ретінде қарастырады. Н. Габдуллин «Абайдың нәзира үлгісі» зерттеуінде ақынның А. Пушкинның «Евгений Онегин» поэмасынан алған жекелеген хаттарын аударма емес назира дәстүрімен ұластырады[2], және ол өз пікірін М. Әуезовтың осы поэмадан жасаған аудармасы жайындағы пікірлерімен сабақтастырады. Ал С. Абдрахманов болса, «Төлтума мен телтума» еңбегінде оны соавторлық, шығармашылық жауап, қазақ тілінде қайта жырланған инвариант деп қарастырады [3]. Сонымен қатар, поэтикалық аударманың прозалық аудармадан айтарлықтай айырмашылықтарының бар екені де сөзсіз. Бүгінгі заманда поэтикалық аударманы әдеби шығармашылықтың дара түрі ретінде қарастыру үрдісі де белең алып келе жатқанын да есепке алған орынды. Дегенде Абайдың аудармашылық шеберлігі, ұлттық көркем кеңістіктегі бейнелер жүйесіне сабақтастыра, оны аударма ретінде емес төлтума ретінде ұсынуы, аталаған пікірлер негіз болғаны сөзсіз.

Абай аудармаларын осы орайда үш арна аясында қарастыруға негіздер бар. Біріншіден, Абай заманында аудармаға бүгінгі заман тұрғысынан емес шығыста қалыптасқан назира дәстүрі негізіндегі шығармашылық жауап деп қарауға болады. Аған ақынның А. Пушкиннен және жекелеген басқа ақындар өлеңі аңғартады.

Екіншіден, И. Крылов пен басқа бірқатар басқа ақындардан аударған нақыл өлеңдері шығармашылық жауаптан көрі таза аударма деуге тоық негіз береді. Себебі өлеңнің сюжеті, жанрлық ерекшелігі, толықтай сақталып отыр.

Үшіншіден, жоғары шеберлікпен жасалған философиялық және лирикалық мазмұндағы өлеңдері. Айталық, И. Гетте, Дж. Байроннан және тағы басқа бірқатар өлеңдерін атауға болады. Бұларда өлең сюжеті де, мазмұны да, көркемдік детальдері де теререң ой тізбегінен өткені анық аңғарылады. Осы орайда, әсіресе Ю. Лермонтовтың «Я не хочу, чтоб свет узнал» өлеңінен ақын шеберлігі айрықша аңғарылады. Түпнұсқа өлең былай болып өрілген:

Я не хочу, чтоб свет узнал
Мою таинственную повесть;
Как я любил, за что страдал,
Тому судья лишь бог да совесть!..
Им сердце в чувствах даст отчет;
У них попросит сожаленья;
И пусть меня накажет тот,
Кто избрел мои мученья;
Укор невежд, укор людей
Души высокой не печалит;
Пускай шумит волна морей,
Утес гранитный не повалит;
Его чело меж облаков,
Он двух стихий жилец угрюмый,
И кроме бури да громов
Он никому не вверит думы... [3].

Абай бұл өлеңді былай аударған:

Менің сырым, жігіттер, емес оңай,
Ешкімнің ортағы жоқ, жүрсін былай!
Нені сүйдім, дүниеде неден күйдім,
Қазысы оның — арым мен бір-ақ құдай.

Жүрегім екеуіне жалбарынар,
Рақымдық пен әділ сор деп жалынар.
Мен тентек пе, түбінде кім жазалы,
Қайғыны жіберуші өзі сынар.

Надандар былшылдайды, құп алмайды,
Үлкен жанның қиялын ұға алмайды.
Теңізден таудай толқын соқса-дағы,
Жағадағы жартасты жыға алмайды.

Құдай мықты жаратқан үлкен жартас,
Былш-былш еткен, бет бұрып, судан қайтпас.
Бұлтта суық дауыл, жаймен сырлас,
Өзгені жан екен деп сырын айтпас [3].

Қарап отырсағыз өлең мазмұны түпнұсқаға өте жақын болып келеді және өлең жолдары да көп жерінде дәлме дәл аударылған. Ал өлеңнің түпнұсқасын былай қойғанда «Менің сырым, жігіттер, емес оңай» өлеңі төлтума туындыдай қабылданады. Себебі, Абай Лермонтовтың «Я не хочу, чтоб свет узнал» атауын ұлттық көркем ойлау жүйесіне сай дәп дәл құйып түсіргендей келтірген. Айтарылығы, бүгінде белгілі болған Абайдың 46 аударма өлеңдерінің ішінде ең көп аударғаны да осы Ю. Лермонтов. Осының өзі олардың рухани жақындығында аңғартатын құбылыс және Лермонтовты аударған келгенде Абай өлеңі әлдеқайда тереңдеп, жаңа мағыналарға ие бола түседі және астары да тереңдей түседі.

Шағын мақала көлемінде тіпті осы аударманың мазмұнын толықтай ашып бердік деген ойдан аулақпыз, алайда өлеңнің бірінші шумағының өзінде «свет узнал» сөйлемі «менің сырым жігіттер» деп нақты оқырманды меңзейді. Лермонтовтың жалпылама сөйлемі қазақшасы нақтылана түскен. Қазақтың сөз мәдениетінде тұспал қаншалықты құптарлық және аллегориялық сарында метафоралық ойлаумен ұштасып жатса да, оның астарындағы нақтылыққа бағытталған емеуріні анық аңғарылады. Екі өлеңді салыстыратын болсақ, ақындық тағдыр мен шығармашылық машахат жақындатқанымен, әр ақынның тағдыр мен өмірінің даралығы, өмір мен шығармашылыққа деген көзқарастары екеуін алшақтатаны көрінеді.

Осы орайда, төлтума туындыдан көрі кей тұста аударма нұсқасы аударушының шеберлігіне қарай төлтума туындыға ұласатыны анық аңғарылады.

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ABOUT WITCHCRAFT

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БАҚСЫЛЫҚ ХАҚЫНДА

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Abstract

In the article, we will focus on the intricacies of witchcraft. It is clear that the power of the secret chants, the rules of the ritual, and the unique style of each shaman, which have come from a community that truly believes in the power of words, are interesting. This article presents the origin, importance, features of the game, the pattern and nature of witchcraft. Although shamans have their own differences, they are all dressed in the same shamanic image. It is said that the owners of magical powers have changed since history.

Аннотация

Мақалада бақсылық өнердің қыр-сырына тоқталамыз. Сөз құдіретіне шын сенген қауымнан жеткен құпиялы жырлардың қуаты, ғұрыптың орындалу ережелері, әр бақсының қайталанбас стилі қызықтыратыны анық. Бұл мақалада бақсылықтың шығу тегі, маңыздылығы, ойынды өткізу барысындағы ерекшеліктері, сарындарының үлгісі мен сипаты берілген. Бақсылардың өзіндік айырмашылықтары болғанымен барлығы бірдей шамандық бейнеде жасақталған. Тылсым күш иелерінің тарихтан бері қандай өзгеріске бет алғандығы айтылады.

Keywords: shaman, mysticism, oral literature, shamans, witchcraft rites, religious tradition, patient, witchcraft, magical treatment.

Кілт сөздер: бақсы, тылсым, ауыз әдебиеті, шамандар, бақсылық ғұрыптар, діни салт, науқас, бақсы сарыны, магиялық ем.

Адамзаттың табиғатқа сөзсіз сеніп, құпия күштерден медет тапқан уақытында бақсылық өнері ортаға шыққан. Халықтың жәрдемшісі һәм саясы саналған ұлы күш иелері қола дәуірінде сахнаға енді. Одан әрі неолит заманында толықтай ықпалдыққа ие болған. Шамандық пен бақсылықтың ұқсатылуы бекер емес. Өйткені екеуі де сырға толы қасиет пен көне тарихты қамтып жатыр. Қазақ ішіндегі бақсы туралы деректер XVIII ғасырдан жетті. Фольклорымызда бақсылық сарынның сипаты, маңыздылығы, әсері, салдары туралы зерттеулер мол ұшырасады. Ш. Уәлиханов, Л. Будагов, В. Бартольд, В. Радлов, А. Диваев сияқты зерттеушілер «бақсы» сөзінің этимологиясына тоқталып, айтарлықтай тұжырымдар жасаған. Бұл сөздің дыбысталуына байланысты көп таластар орын алса да, шығу тарихына қарап отырып көне түркі тіліне тәндігі анықталған. Ол туралы көнетүркі сөздігінде мынадай мәлімет кезігеді: «BAQ – внимательно смотреть, обозревать, разгадывать» [1, 81]. Бұл сөз кәдімгі бағу, емдеу, күту сөздерімен мағыналас екендігі талас тудырмайды. Бақсылардың ауыз әдебиетіне жақындығы олардың ғұрып кезінде орындайтын жырлары арқылы көрінеді. Сондықтан А. Байтұрсынов бақсы поэзиясын салт өлеңдеріне, М. Әуезов пен С. Сейфуллин дін салтынан туған жырларға кіріктірген. Жалпы бақсылардың атқарған қызметі, ел ішіндегі абыройлары ұшан теңіз. Олар емдік, тәуіптік, балгерлік, болжағыштық, сиқыршылық қасиеттері басымырақ әрі ақындық, жыраулық өнерлерін қоса қамтиды. Әдебиеттің алғашқы

өкілдері ретінде қарастыра аламыз. Әрине, уақыт көшімен бұл тұлғалардың сипаты өзгергені анық алайда құпиясына әлі толық жеткен жоқпыз. Сан ғасырдың қойнауындағы өзге құбылыстар сықылды бақсылықтың да әлеуметтік орны, функциялары, түсініктері өзгеріске түсті. Аталмыш өнердің бастауынан бүгінге дейінгі хронологиясын Б.Г. Богораз-Тан төрт түрлі кеземен тарқатады. Олар: рулық қоғамға дейінгі үй ішіндегі бақсылық, эскимостар мен чукшалардағы мамандалған бақсылар, тайпалық қоғамдағы ықпалы бақсылық, таптық кездегі ыдыраған бақсылық. Соңғы кезең көрінісі турасында «Мал өсірумен күнелткен, билер табы үстемдік қылған рулар, бері келе, тіршілік қылу ретінде, аздап болса да тәжірибе, білім қорын қасықтап жинап, көп тәңірге жығыла құлшылдық қылу қалыбы босап, бақсылық азғындай берген» [2, 167] делінеді. Яғни ислам діні ел арасына жайлап, сан құдайға мінажат жасау азайған тұста бақсылықтың сөнуге бет алғанын байқаймыз. Ендігі жерде аруақтарға құлшылық еткен бақсылар ислам дініне қарай ойысып, бақсылықты бір жаратқанның әмірімен болады деген түсінік қалыптастырады.

Бақсылықтың сонау магиялық күштерге бас иген қоғамнан келе жатқандығын және қазіргі сипатын сарындарынан байқай аламыз. Жоғарыда сөз еткендей ылғи өзгерістерге сай бейімделуі қоғамның қажеттілігінен туындаған. Ел арасында жұғанағы қалған тылсымдық ежелгі тастарға бейнеленді. Ежелгі заманнан бері жиырмасыншы ғасыр басына дейін шамандар өз қызметін мүлтіксіз атқарды. Қазақ шамандары саналатын балгерлер, бақсылар қашанда назар аудартқан. Олардың басынан бақайына дейінгі сыртқы сипаттары, әрекеттері, амалдары, әулиелік қабілеттері, гипноздық күйге түсіре алуы, аспапта шебер ойнауы, әртістік көрсетілімдері ешкімді жай қалдырмайды. Тұқымқуалаушылық әрі мол дайындықпен меңгерілетіндіктен өнердің шын ұстанушылары көп емес. Екіншісі бірі саналмайтын бақсылардың құрметті орындары, беделдері болды. Ауырған адамға ем ретінде алыстан алдырса, кей бақсылар ауруды өзі іздеп келетін болған. Жалпылай айтқан көпшілікке жаратқанның қалаулысы ретінде саналды. Басқа дүниемен тікелей байланысқа түсетіндіктен әр қылығы адамдарға тұнған жұмбақ дей аламыз. Дегенмен бақсылардың ем үстінде атқаратын ғұрыптарын қалың көпшілік тамашалай алады. Діни салтпен ұштасқандықтан ем жасалар кезде көрермендерің өзіне мән қойылды. «Бақсы келіп, зікір салатын күні сол ауыл адамдары жуынып-шайынып, таза киімдерін киіп баратын»[3, 18]. Алдымен тамашалаушылар бақсының қасиетіне шүбәсіз сеніп келіп, аурудың айығып кетуі үшін ниеттенуі керек. Сондықтан орындаушының әрбір жоралғысын үрей үстінде бар ынтасымен бақылайтын. Анығында ойынды қарауға егде, орта жастағы мұсылман адамдар, ауырған балалар, құрсақ көтермеген әйелдер қатысқан. Көрермендердің дені бақсының сиқырлық өнерін қараумен қатар аурудың айығып кетуіне тілектестік білдіретін еді. Ислам дәуіріндегі бақсылардың әрекетінен мұсылмандық жолды қатаң ұстанып, құран аяттарын оқып, аруақтарға бата бағыштауын байқаймыз. Бірақ кей ескі салттары аспаптарында ойнап, жалбарыну сарындарын орындаған. Осы ретте бақсылардың біразы керемет музыкант болғандығы, әуезді үнге ие екендіктері айтылады. Мысалы Ұмсынай, Балбике, Қалдықыз, Орал, Күләнда, т.б сияқты бақсылардың музыкалық аспапта шебер ойнағандығы туралы деректер бар. Ырғақты сарындар науқасқа әсер сыйлап, дерттен айығуына себеп болған. Бақсы жырларын зерттеушілердің пікірінше сарынның уақыт талабына сай өзгеріске ұшырағандығы, ел аузындағы құранды жолдар мен жабайы жырлардан тұратындығы жазылған. Әсіресе сарынның басы жұрт талай айтқан өлеңдермен ұқсас келіп, кейін әр бақсының нақышына сай жасақталады.

Бақсы ойындарын кезінде міндетті түрде сарындары қоса айтылады. Аспаппен орындалатын сарындар отырған көпшілік және науқасқа тым әсер етіп, емдік әрекеттің бір бөлігі саналған. Айтылар сарын бақсының «әуелі, құдай, сен онда» дегендей әулиелерге сыйынумен басталады. Ерекше пірлері ретінде батырлардың, кейде өз ата-бабасының, атақты бақсылардың аруағынан медет тілеп, кейін көмекші жындарын шақырады. Таласбай бақсы әйел адамдарға ем жасар алдында Сары бүркіт және Көк барақ атты жындарынан көмек күтетін болған. Бұл орайда әртүрлі мейірімді жын атаулары өз бақсысына жәрдем беріп, қызметін атқарады. Әдетте бақсылар жындарын қорқытады, жалбарынады, әмір береді.

Қорқытты бақсылықтың атасы деп санайтын болсақ, «Қорқыт күйін» орындау да емнің ажырамас бөлшегі болды. Бұл күйдің зарлы үніне суық сарын қосылған кезде ортада үрей орнап, қорқыныш сезімі бойлайды. Күйдің берер ызғарлы үні түсінікті, ал өлеңді сарындардың нендей шошытар халі болуы мүмкін деген сұрақ келеді. Бақсының жырларының ішінде зәрені алар «алпыс отау қара жын», «арқасында алты көз, желкесінде жеті көз жын», «жын да болса сырласым-ай», «жеті пері келер ме», «аспандағы көп пері», «кереге бойлы кер жылан», «үй айнала сұр жылан», т.б. жолдар кезігеді. Бұл айтылған зәрлі сөздердің барлығы науқастың бойын дендеп алған қара күшті қуып шығуға септігін тигізеді екен. Бақсы аурудың шығу белгілеріне сөз жеткізу үшін мейірімді жындарына «дұрысын айт», «ақиқатын көрсет» сықылды сөз тіркестерін үнемі қайталайды. Бақсының сырт көзге тұрпайы, түсініксіз қимылдар жасауы – жындармен айқасып жатқандығы. «...бақсы бір де бір бос қимыл жасамайды: әрбір әрекетінде астар бар, әрбір қимылында қатаң қалыпқа, өрнекті өлшемге түскен пантомималық мазмұн бар» [4, 143] деген тұжырымдар анық дәлел. Сонша сиқырға толы емдік әрекеттен кейін ғана аурудың айығып, айықпасын жұртшылыққа жария етіледі. Осылайша емделушіге екінші жан бітіреді не зиянды жыннан сақтап қала алмайтындығы ортаға шығады. Бақсылардың көп ісі жарияға мәлім әрі мінсіз жасалатындықтан, оларға халық шәк келтірмейтін еді. Бақсы жындарын кезек-кезек шақырған сайын бірде сарнайды, бірде қуанады, бірде өтінеді де тиісінше түрлі қозғалыстар жасап, артынша қамшымен, қанжармен, тоқпақпен, балғамен, кетпенмен қауіпті тәсілдер орындауы мүмкін. Бақсылардың зиянкестермен алысу үстінде жасайтын қиылдарына айтылатын дау көп. Бірақ мәселе аурудың айығып кетуінде. Жын қысқан бақсының алапатпен шайқасуына күмән келтіретіндер болады әрине. Алайда «саха бақсылары ішке қанжар сұғу түтілі өз басын өзі кесіп алып, қолына ұстап тұратын немесе жанына қоятын» [5, 203] деген мысалдар көпшіліктен сыр бүгетіні рас. Қанша дегенмен бақсының атқаратын ғұрыптары және жырларын бөлек қарастыра алмаймыз. Екеуі біте қайнасып тұтас өнерді шығарып тұр. Ем барысында орындалатын әрекеттердің ретіне қарай айтылатын сарын үш сюжеттік қабаттан құралады екен:

1. Белгіленген пірге сиыну. Бұл бөлімде әулиелерге үміт артылып не аруақтар шақырылады. Күләнда деген бақсы домбыра арқылы орындаған сарынының кіріспесінде бабаларынан былай жәрдем тілейді:

*Бисмиллә деп бастайық,
Бисмилләсіз іс қылма.
Айналайын әруақ,
Әруақ деп шақырдым,
Шақырып сізге жалындым,
Жалынғанда жәрдем бер,
Силағанда силай бер.
Айналайын, Аққожа,
Шақырып сені жалындым.
Айналайын, Сұрқожа,
Айналайын Нұрқожа,
Шақырып сені жалындым! [3, 22]*

2. Жын шақыру. Науқасқа шара табу үшін көмекші мейірімді жындарына іздеу салынады. Қазақ арасында бақсының ем-дом жасау үстінде үшкіру не ұшықтау, қағу, көшіру сияқты рәсімдері өткізіледі. Арғын Досмырза бақсының мынадай сарынын жолықтырдым:

*Жын атасы Берлібай,
Шақырғанда келдің бе-ай,
Келші бермен жын пері,
Шақырғанда кел пері!
Айда шіркін жындар-ай!
Кешіктің нағыз мұндар-ай! [2, 164]*

3. Жын қайтару. Бақсылар сарынының ақырғы бөлігі. Ем барысында екі түрлі жақсы және жаман жындар айқасып болғандығының дәлелі.

IV international scientific conference. Dortmund. Germany. 30-31.03.2023

Бақсылар дауа іздеуде үшкіру, қағу, көшіру сияқты магиялық емді жүзеге асырып, соңында жын қайтарады. Бақсының ойын барысындағы жындармен арпалысы, науқасқа жасалар шара ғұрыптық дәстүрмен, шипалы сөз өрнектерімен шебер бейнелетіндігін айқындадық. Ал ескі сенімен туындаған сарын үлгілері жұртшылықтың жәрдемшісі саналды.

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HEYDAR ALIYEV AND AZERBAIJAN LITERATURE

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Abstract

Every nation has geniuses who played the role of saviors in the history of national freedom and independence. With their determination, those geniuses led their people behind them and played the role of winners in the most fateful moments. Although there are many people who write about history in the world, there are few people who make history. Because creating history is much more difficult and responsible than writing history. The national leader of the Azerbaijani people, Heydar Aliyev, has left a bright and indelible mark on the history of the modern world as a great personality, an extraordinary intelligence, an innate talent, and a wise statesman. The national leader of the Azerbaijani people, Heydar Aliyev, is both history and the person who created history! The great leader Heydar Aliyev is one of those personalities who himself created a history and chronicle and had the power to regulate the course of time. Today, not only our people, but all the peoples of the region, the great Islamic world and the Turkic peoples benefit from the fruits of his activity and hard work.

Keywords: Heydar Aliyev, a historical figure, heritage, independent Azerbaijan, literature, classical poets, writers, alphabet, the Azerbaijan Language

Introduction. There are personalities in the world whose name is connected not only to the historical fate of the people and nation they belong to, but also to a great era. These are great personalities who create history. Great personalities are the thinking brain, speaking language, and seeing eye of the people. A nation without a great personality and leader is like a headless nation. We are happy that there were geniuses raised by our people, and each of them created history in their own time and, of course, in the following years. Our great poets, musicians, scientists, generals, women are famous in history. Gatran Tabrizi, Khatib Tabrizi, Khagani Shirvani, Sheikh Nizami Ganjavi, Sheikh Mahmud Shabustari, Imameddin Nasimi, Shah Ismail Khatai, Mohammad Fuzuli, Mirza Fatali Akhundzadeh, Mirza Jalil, Sabir, Huseyn Javid, Jafar Jabbarli, Alibey Huseynzadeh, Uzeyir Hajibeyli, Samad Vurghun are the creators of our spiritual and literary history.



Heydar Alirza oghlu Aliyev (1923-2003) is the leader of the great personalities who brought up the Azerbaijani people in the 20th century and created history. Tall, with unusual vision, General H. Aliyev was a historical figure with a phenomenal memory, boundless mind, wonderful speech ability, great political will, flexible logic, amazing historical foresight, divine talent. (3)

The great leader Heydar Aliyev is the national leader of Azerbaijan and the Azerbaijanis. That is why the name of our great leader is held high all over the world, and his memory is remembered with respect.

According to decree of the President of the Republic of Azerbaijan I. Aliyev has declared 2023 the "Year of Heydar Aliyev" in the Republic of Azerbaijan.

The brilliant leader Heydar Aliyev, who dedicated every moment of his life to the development of national revival and human values, was always attentive to intellectuals.

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As history recedes, we understand more clearly the greatness of Heydar Aliyev's genius and the greatness of his personality. In fact, this extraordinary personality is always around us. Because our President Ilham Aliyev, a worthy follower of the Great Leader, governs the independent Azerbaijan, which is Heydar Aliyev's masterpiece, with the principles of statehood that he inherited, and turns the ideals that he was unable to realize into history.

It is very difficult to cover the magnificence, historical value and scale of the works done by this incomparable person for our nation. Among the riches of Heydar Aliyev's legacy, his rich theoretical heritage occupies a special place. His legacy is our national treasure. An important part of this valuable heritage is determined by his theoretical concepts about different types and genres of culture, literature and art.

When Heydar Aliyev talked about literature, theater and cinematography, music and painting, he approached those fields precisely from the point of view of statehood interests. Azerbaijan language, literature, cultural and moral values are the main sources, artistic and philosophical sources of the Azerbaijani philosophy of the national leader, the national and state ideology of independent Azerbaijan. Heydar Aliyev attached special importance to the classical heritage, which is the incomparable wealth of the Azerbaijani people and to fiction in general. He said:

"Today, in general, when talking about independence, it is necessary to mention how rich our literature is for our people. Our literature and culture are the national wealth and intellectual property of our people. The greatest service of our literature to our people is that our poets and writers constantly tried to awaken national feelings in Azerbaijan, our people, our nation with their works. The process of national self-awareness, national awakening, and revival is primarily through literature." (1)

Thanks to the great influence of Heydar Aliyev, classics of 20th century Azerbaijani literature - Suleyman Rahimova, Rasul Raza, Mirza Ibrahimova, Suleyman Rustam - were given the most honorable award of that time - Hero of Socialist Labor. Our literature and culture have risen to the ranks of the most advanced cultures in the world. It is true. By celebrating the 1300th anniversary of the world's ancient, great Turkish epic "Kitabi-Dade Gorgud" all over the world, he proved that the epic is primarily an Azerbaijani event, and by gathering the Turks of the world scattered by the Soviet regime, he managed to create a Turkish unity around this epic. Thanks to his wisdom and foresight, the 500th anniversary of the great Azerbaijani poet Muhammad Fuzuli was celebrated all over the world. On November 2, 1994, in his speech at the Grand National Assembly of Turkey, which was attended by representatives of more than 80 nations, H. Aliyev said: "Fuzuli was a person who united Turks in the past." But now, when the Turkic world is divided in the 20th century, and almost the majority of the countries belonging to the Turkic world (except Turkey) are living in regimes that are not compatible with their life, history, and traditions, Fuzuli has kept us alive and brought us to these days."

Bringing the body of the great romantic poet and philosopher H. Javid to his native Nakhchivan from distant Siberia, building Huseyn Javid's mausoleum, erecting magnificent statues to the great poet Imaddin Nasimi, romantic poet Huseyn Javid, Nariman Narimanova, Jafar Jabbarli in Baku is a great manifestation of Heydar Aliyev's concern for the classical literature of Azerbaijan. On January 15, 1982 he participated in the opening of M. P. Vagif's Mausoleum in Shusha.

The creation of the memorial complex of martyrs and other monumental works of art, the opening of home museums of our literary and cultural figures, architectural monuments such as the "Gulustan" Palace, the Opera studio, and the Choreography school were also remarkable events. All these were manifestations of the unprecedented rise of the national culture of the Azerbaijani people.

Heydar Aliyev treated his contemporaries with special care, awarded them with high state awards, celebrated their anniversaries in a solemn manner. In the name of People's Writers Ilyas Efendiyev, Ismayil Shikhli, Anar, Huseyn Abbaszadeh, Yusif Samadoghlu, Magsud Ibrahimbeyov, Huseyn Ibrahimov, People's Poets Mammad Araz, Nabi Khazri, Bakhtiyar Vahabzade, Mirvarid Dilbazi, Samad Vurghun, Muhammadhuseyn Shahriyar, Gabil, Khalil Rza Uluturk, Zalimkhan Yagub's ceremonies are unforgettable.

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Chingiz Aytmatov, one of the great writers of the world, a great Turkish writer, said "Heydar Aliyev is a historical, even a legendary figure."

Heydar Aliyev was an encyclopedic minded, wise person. He had unparalleled services in enriching the national-spiritual and moral values of Azerbaijan with universal ideas. He cared about the historical past full of heroic deeds, rich spiritual values, material and moral heritage, and art of the Azerbaijani people. Heydar Aliyev constantly followed the comprehensive development and rise of our national culture, which enriched the spirituality of the people and made it known all over the world, and considered it as his most important task. Heydar Aliyev used to say: "One of the biggest and distinguishing features of our literature, art, and culture is that from time to time, talented people open new paths and create new forms in our culture."

The fact that our modern literature, art and culture impressed the world with its rare pearls in the human arena, raised the glory of our country, and the fact that our people had an ancient culture confirmed this wise idea. As it is known, rapid development of all spheres of Azerbaijani culture in the 20th century, wide-scale promotion and great achievements were the direct result of Heydar Aliyev's exceptional historical services. In the 70s and 80s under his leadership, especially in the later period, care for our cultural and literary heritage, visual arts, ballet and theater increased significantly. As a result of Heydar Aliyev's direct patronage and hard efforts, Azerbaijani art has become known all over the world.

During the tenure of the former USSR Council of Ministers as the first deputy chairman, Heydar Aliyev still took care of Azerbaijani culture. In addition to all this, in the first stage of the period in which he was in power, we should not forget that he treated the anniversaries of both modern and classical poets and writers with special care. Heydar Aliyev, who was appointed the head of the country in 1969, managed to celebrate the 60th anniversary of Rasul Rza at the state level in 1970. This was an indicator of great trust in the writers of that time. This indicator increased every year and covered a wider arena. Thus, in 1973, both Nigar Rafibeyli's 60th and Nabi Khazri's 50th anniversaries were celebrated with a great ceremony.

When talking about the attention to the classics, it is necessary to remember the annual jubilee events. Along with celebrating the 100th anniversary of Nariman Narimanov in 1972, the erection of his statue was an important event for our literary history. Also, on September 13, 1973, the celebration of the 600th anniversary of our human classic Imadedin Nasimi in Moscow as well as in Baku meant that the entire empire was encouraged to pay attention to Azerbaijan. As a result, a monument to I. Nasimi was erected in Baku in 1980.

The jubilee of the poet Nizami Ganjavi was coming. On this occasion, on January 6, 1979, a decision was made on "Measures to further improve the study, publication and promotion of the legacy of the great poet and thinker of Azerbaijan, Nizami Ganjavi". Despite all the contradictions of the time, the fact that Nizami Ganjavi was an Azerbaijani poet was clearly emphasized in the decision. This meant that a great empire studied and promoted Nizami Ganjavi as a poet of Azerbaijan. As a result of the implementation of the decision, the poet's 840th birthday was celebrated in 1981 and 850th in 1991 at the state level.

Let's take a look at some jubilee ceremonies held during the reign of Heydar Aliyev. The anniversaries included different groups. For example: Huseyn Javid, whose 90th birthday was celebrated in 1974, was a victim of repression. On May 25, 1979, the 100th anniversary of the romantic poet Muhammad Hadi was celebrated, and on October 17, 1980, the 100th anniversary of the critical realist poet Aligulu Gamkusal was celebrated. On July 12, 1982, the 70th anniversary of poetess Mirvarid Dilbazi was celebrated at the state level.

On October 29, 1997, the great leader signed a decree "On the celebration of the 90th anniversary of the birth of Muhammadhuseyn Shahriyar". In general, the state care shown to the people of word continued even after our country gained independence.

Despite the consequences of the unjust war that our country suffered in the 90s, Heydar Aliyev still did not reduce his attention and care to the field of literature. In 1994, the celebration of the 125th anniversary of the satirical pen master Jalil Mammadguluzadeh was a great event during that period of difficulties. Also awarding poets who distinguished themselves in Azerbaijan's freedom struggle

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by the state served national independence. Mammad Araz and Khalil Rza Uluturk were also awarded the "Istiqlal" order, which was first awarded to Bakhtiyar Vahabzadeh by Heydar Aliyev in 1995.

The brilliant leader Heydar Aliyev, during his speech at the III Congress of Writers of the Turkic World on November 6, 1996, emphasized the names of human and common Turkish monuments and the events written in the address of the great Turkish geography: "Dade Gorgud", "Manas", "Alpamysh", "Koroghlu" in ancient times. epics, our genius poets and writers who belong to all our peoples - Nizami, Yunus Amre, Alishir Navai, Fuzuli, Nasimi, Mahtingulu, Abay and others have created immortal works that reflect the historical and moral values of our peoples and make our people known in the world..."

Heydar Aliyev participated in the congress of writers during the years of independence as well as during the years of Soviet rule. In October 1997, his participation in the 10th Congress of the Azerbaijan Writers' Union and his words, "I personally love literature and I have loved literature since I was young, even since I was a child, when I read the first examples of literature in school" were an expression of great love for literature. As a result of that congress, the magazines "Azerbaijan", "Ulduz", "Gobustan" and "Adabiyat newspaper", which are the press organs of the Azerbaijan Writers' Union, started to be published with funding from the state. When talking about Heydar Aliyev's services in the field of literature, it should be said that he was not indifferent to folklore and folklore examples. In 1997-2000, the organization of the jubilee of the "Dade Gorgud" epic in Dresden and UNESCO, in addition to Baku, is an example of this. In 2000, a series of events held on the occasion of the 1300th anniversary of the "Kitabi-Dade Gorgud" epic gave a great boost not only to folklore studies, but also to literary studies.

Continuing this tradition President Ilham Aliyev signed an order on December 28, 2013 about the making of a multi-series feature television film based on the epics of "Dade Gorgud" and on February 20, 2015, the celebration of the 200th anniversary of the first translation and publication of "Kitabi-Dade Gorgud into German." The state value given to the epic "Dada Gorgud" was the irreplaceable value given to the national identity. The international organizations that took into account Heydar Aliyev's services of this type did not forget to appreciate his sacrifices. The awarding of the International Atatürk Peace Prize, established since 1986, to Heydar Aliyev on November 1, 1999 is a part of that value. A year later, on June 22, 2000, the great leader, who spoke at the All-Russian Congress of Azerbaijanis in Moscow, once again proves that he is proud to be with every Azerbaijani. He emphasizes that they should serve the interest of national statehood regardless of where they live. He shows the best example of this in his activity. With the establishment of the Atatürk Center in our capital on March 9, 2001, another contribution was added to the great leader's national services.

Heydar Aliyev did not ignore the development of not only literature, but also the language, which is the main reference point of literature. On June 18, 2001, the hegemony of the Russian language was reduced by the decree of the President of the Republic of Azerbaijan "On improving the implementation of the state language". A few months later, on August 1, 2001, the rule of the Cyrillic alphabet, which lasted more than half a century, was put to an end by issuing a decree "On the establishment of the Day of the Azerbaijan Alphabet and the Azerbaijan Language". The decree of January 4, 2003 "On the implementation of the Azerbaijan Law on the State Language of the Republic of Azerbaijan" laid the groundwork for purposeful implementation of all these works.

As it can be seen, Heydar Aliyev took special care of every writer and created conditions for them to receive their deserved values.

Thanks to him, Azerbaijan culture was known and loved in the world cultural space. Even today, this legacy is continued. The head of the country pays enough attention to Azerbaijan's literature, culture, and art, special conditions are created for discovering and revealing young talents.

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SPECIAL FEATURES OF WRITTEN TRANSLATION

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BESONDERHEITEN DER SCHRIFTLICHEN ÜBERSETZUNG

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Die schriftliche Übersetzung ist eine Art der Übersetzung, bei der die Übertragung eines Textes in der Ausgangssprache in die Zielsprache schriftlich im Übersetzungsprozess durchgeführt wird. Der Schriftübersetzer bedient sich bei Bedarf verschiedener Hilfsquellen, die ihm Hintergrundwissen zum Text liefern: Wörterbücher, Nachschlagewerke, Rücksprache mit Spezialisten.

Die schriftliche Übersetzung ist nicht mit den Belastungen und Schwierigkeiten verbunden, die mit der direkten Kommunikation und der Arbeit mit Menschen verbunden sind, aber im Idealfall erfordert sie absolute Genauigkeit, die virtuose Beherrschung der schriftlichen Fassung von Mutter- und Fremdsprachen und manchmal die Beherrschung der literarischen Verarbeitung. Hier wird viel von den konkreten Anforderungen des Kunden, seinen Konditionen, Umfang und Termin bestimmt. Es sollte berücksichtigt werden, dass eine schriftliche Übersetzung im besten Fall die sprachliche Bearbeitung, die Überprüfung der Einhaltung durch einen technischen Berater und die stilistische Bearbeitung durch einen Muttersprachler umfassen kann.

Die mentalen Mechanismen des Übersetzers funktionieren unter relativ ruhigen Bedingungen. Bei der schriftlichen Übersetzung wird zuerst der theoretische Aspekt der Arbeit des Übersetzers hervorgehoben, sowie die Fähigkeit, Sprachmittel richtig einzuschätzen und auszuwählen, um den Stil des Originals zu bewahren.

Der eigentliche Übersetzungsprozess entfaltet sich im Laufe der Zeit, und wenn der zu übersetzende Text eine mehr oder weniger lange Reihe von Nachrichten ist, kann seine Übersetzung nicht sofort in Form eines einzigen Vorgangs durchgeführt werden.

Der Übersetzer unterteilt den Text in separate Segmente und beginnt mit der Übersetzung des nächsten Segments erst, nachdem die Übersetzung des vorherigen abgeschlossen ist. Die Länge eines solchen Segments ist für verschiedene Sprachen und verschiedene Übersetzungsarten unterschiedlich.

In den meisten Fällen ist eine solche Mindesteinheit des Übersetzungsprozesses eine Aussage (ein bestimmter Satz) im Text. Auch wenn eine einzelne Aussage nicht genügend Informationen enthält, um eine Übersetzungsoption auszuwählen, und dafür man sich mit dem Inhalt anderer Textteile vertraut machen muss, beginnt der Übersetzer nicht mit der Übersetzung der nächsten Einheit, bis er die Übersetzung dieser Aussage abgeschlossen hat. Eine Ausnahme bildet die Verwendung der Satzkombinationstechnik, bei der der Übersetzer gleichzeitig zwei benachbarte Aussagen übersetzt. Im Übersetzungsprozess sind diese beiden Phasen miteinander verbunden.

Die Technik der Arbeit mit einem Wörterbuch ist ein wichtiger Teil der Tätigkeit eines Übersetzers im Übersetzungsprozess. Auf der Suche nach einer Übersetzungsmöglichkeit greift der Übersetzer immer wieder auf die Einheiten der Ausgangssprache im Original zurück, sucht im Wörterbuch nach deren Bedeutung und überprüft gleichzeitig, ob es sich lohnt, eine der vom zweisprachigen Wörterbuch angebotenen Möglichkeiten in der Übersetzung zu nutzen.

Wenn die Materialien des Wörterbuchartikels direkt für die Übersetzung des gegebenen Textes verwendet werden können, beschränkt sich die Aufgabe auf die richtige Wahl des Wörterbuchgegenstücks. Allerdings gibt es in der lexikographischen Quelle oft keine solche Variante, die den Bedingungen eines bestimmten Kontextes genügen würde. In diesem Fall sucht der Übersetzer nach der Einheit der Zielsprache, die er benötigt, vergleicht Wörterbuchoptionen, hebt die

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allgemeine Bedeutung des zu übersetzenden Wortes hervor und wendet es auf die Bedingungen des Kontexts an.

Der folgende Grundsatz, der die Strategie des Übersetzers bestimmt, wird üblicherweise als die Anforderung formuliert, „den Sinn, nicht den Buchstaben des Originals zu übersetzen“ und zielt auf die Unzulässigkeit des blinden Kopierens der Form des Originalwerkes ab. Übersetzen ist immer eine inhaltliche Operation: nur der Inhalt des Originals kann in einer anderen Sprache wiedergegeben werden. Was die Elemente der Form des Originals betrifft, die die Organisation des Inhalts, die Anzahl und Reihenfolge seiner Teile bestimmen, dann ist die Reproduktion solcher Strukturelemente wünschenswert. Tatsächlich bedeutet die Konzentration auf "Bedeutung, nicht auf den Buchstaben" die Notwendigkeit, die Bedeutung von Spracheinheiten im Kontext richtig zu interpretieren, d.h. die Anforderung, sich nicht mit der Bedeutung zufrieden zu geben, die nur mit den am häufigsten verwendeten Bedeutungen dieser Einheiten verbunden ist.

Ein wichtiges Prinzip der Übersetzungsstrategie besteht darin, dass der Übersetzer relativ wichtige Bedeutungselemente im Inhalt des zu übersetzenden Textes unterscheidet. Es wird davon ausgegangen, dass der Übersetzer versucht, den gesamten Inhalt des Originals möglichst vollständig wiederzugeben und nach Möglichkeit eine „direkte Übersetzung“ unter Verwendung ähnlicher syntaktischer Strukturen und der nächsten Äquivalente der lexikalischen Einheiten des Originals vornimmt. Aber gleichzeitig ist nicht alles im Inhalt des Originals gleich. Es lohnt sich, Teile dieser Inhalte nach dem Grad ihrer Bedeutung für einen bestimmten Kommunikationsakt zu unterteilen und ggf. ein weniger wichtiges Bedeutungselement zu opfern, um wichtigere Inhaltsbestandteile des Originals erfolgreich zu reproduzieren.

Ein weiteres strategisches Prinzip des Übersetzers ist das Postulat, dass die Bedeutung des Ganzen wichtiger ist als die Bedeutung einzelner Teile, dass die einzelnen Details zugunsten der korrekten Übertragung des Ganzen geopfert werden können.

In Wirklichkeit spiegelt diese Überzeugung die Tatsache wider, dass die Komponenten des Diskursinhalts nicht durch einzelne Teile der Aussage ausgedrückt werden, sondern durch die Gesamtheit der Elemente, aus denen sie besteht. Diese inhaltlichen Bestandteile sind kommunikativ die wichtigsten, und die Überlegenheit des Ganzen gegenüber dem Teil findet ihren Ausdruck in der Ersetzung sprachlicher Mittel, deren Bedeutungen als Teil des Inhalts betrachtet werden.

Ein weiteres Postulat, das der Strategie des Übersetzers zugrunde liegt, erklärt, dass die Übersetzung den Normen der Zielsprache des zweiten Autors vollständig entsprechen muss; Der Übersetzer muss die Vollständigkeit der Zielsprache besonders sorgfältig überwachen. Der Text muss so übersetzt werden, als wäre er vom Autor des Originals geschrieben worden. Aus diesem Grund sollte die Übersetzung nicht von den Originaltexten abweichen, und der Übersetzer muss die notwendigen Änderungen am übersetzten Text vornehmen, um ihn natürlicher zu machen.

Technical sciences

ELECTRET EFFECT IN POLYMERIC COMPOSITE FIBER-POROUS MATERIALS BASED ON POLYPROPYLENE

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ЭЛЕКТРЕТНЫЙ ЭФФЕКТ В ПОЛИМЕРНЫХ КОМПОЗИТНЫХ ВОЛОКНИСТО- ПОРИСТЫХ МАТЕРИАЛАХ НА ОСНОВЕ ПОЛИПРОПИЛЕНА

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Введение

Полимерные волокнисто-пористые материалы (ВПМ) широко используются в технике. С их помощью решается ряд задач инженерной экологии, включая проблемы фильтрации газов и жидкостей от загрязнений. Одним из популярных методов формирования ВПМ является технология пневмоэкструзии (melt blowing) [1]. Она позволяет сформировать фильтроматериалов и фильтроэлементы в различных конструкционных вариантах и с разными структурно-морфологическими особенностями. Поскольку технологический ресурс крупнотоннажных волоконообразующих полимеров известен и практически исчерпан, актуальной задачей является разработка ВПМ на основе сочетаний полимеров с

функционально активными добавками. Одним из факторов функциональной активности компонентов ВПМ выражен в виде электретного эффекта [2].

Цель настоящей работы – продемонстрировать электретный эффект в полимерных волокнисто-пористых материалах на основе полипропилена, содержащего в качестве модифицирующей добавки полифениленсульфид.

Материалы и методы исследований

Волокнисто-пористые материалы (ВПМ) получали методом пневмоэкструзии композиций на основе полипропилена, наполненного полифениленсульфидом в количестве 10, 20, 35 масс. %. Полипропилен (ПП), относящийся к категории полиолефинов, является волокнообразующим полимером, который массово используется для формирования ВПМ фильтрационного назначения, включая средства индивидуальной защиты органов дыхания. Полифениленсульфид (ПФС) представляет собой частично-кристаллический (60–65 %) неполярный термопластичный полимер с низким водопоглощением (0,02 %). ПФС обладает рядом уникальных свойств: высокая температура эксплуатации позволяет использовать его при температурах до 250, а кратковременно – до 270 °С; радиационная стойкость и огнестойкость; может применяться в узлах, контактирующих с агрессивными средами при повышенных температурах.

Механическое смешение ПП и ПФС осуществляли в двухшнековом экструдере. ВПМ получали методом пневмоэкструзии (melt blowing).

Образцы ВПМ обрабатывали в коронном разряде отрицательной полярности с напряжённостью поля 5 кВ/см в течение 10 минут при температуре 20 °С.

Для исследования электретных свойств использовали комбинацию методов. Измеряли эффективную поверхностную плотность заряда (ЭППЗ) – величину, характеризующую объёмный и поверхностный заряд, являющийся одним из основных параметров электретов. Методом термостимулированной деполяризации (ТСД) получали спектры термостимулированных токов, иллюстрирующие интенсивность и температурные диапазоны релаксации заряда, происходящей вследствие нагрева образца.

Результаты и обсуждение

На рисунке 1 представлены фотографии внешнего вида и микроструктуры ВПМ. Значения ЭППЗ, учитывающие поправку на толщину образца, приведены в таблице 1.

Среднее значение ЭППЗ образцов ВПМ до обработки в коронном разряде колеблется в диапазоне от –0,2 до –0,7 мкКл/м². После обработки в коронном разряде зафиксировано повышение величины ЭППЗ, при этом с ростом содержания ПФС от 10 до 35 % ЭППЗ образцов ВПМ растёт до значений 6–11 мкКл/м².

Рост величины ЭППЗ свидетельствует о том, что в композитном ВПМ, полученном методом melt blowing, возникают ловушки носителей заряда, причем их концентрация зависит от количества ПФС, введенного в ПП. Поскольку температура плавления ПФС значительно превышает температуру плавления ПП, полифениленсульфид в объеме волокон в значительной степени оказывается в непроплавленном состоянии. В результате возникают выраженные границы раздела фаз. Оба компонента являются диэлектриками, способными к электрической поляризации и накоплению заряда. В ходе высокотемпературного процесса melt blowing неполярные макромолекулы ПП могут окисляться кислородом воздуха, вследствие чего сформированные волокна имеют окисленный поверхностный слой. Это способствует возникновению дипольной поляризации. В свою очередь, частицы ПФС, контактируя с этим слоем, создают локальный градиент проводимости, благодаря чему возникают возможности для поляризации Максвелла–Вагнера. В исследуемой системе ловушки носителей заряда могут быть локализованы на границах раздела фаз и/или определяться измененной при melt blowing сегментальной подвижностью макромолекул ПП (преимущественно в окисленной фазе) и ПФС.

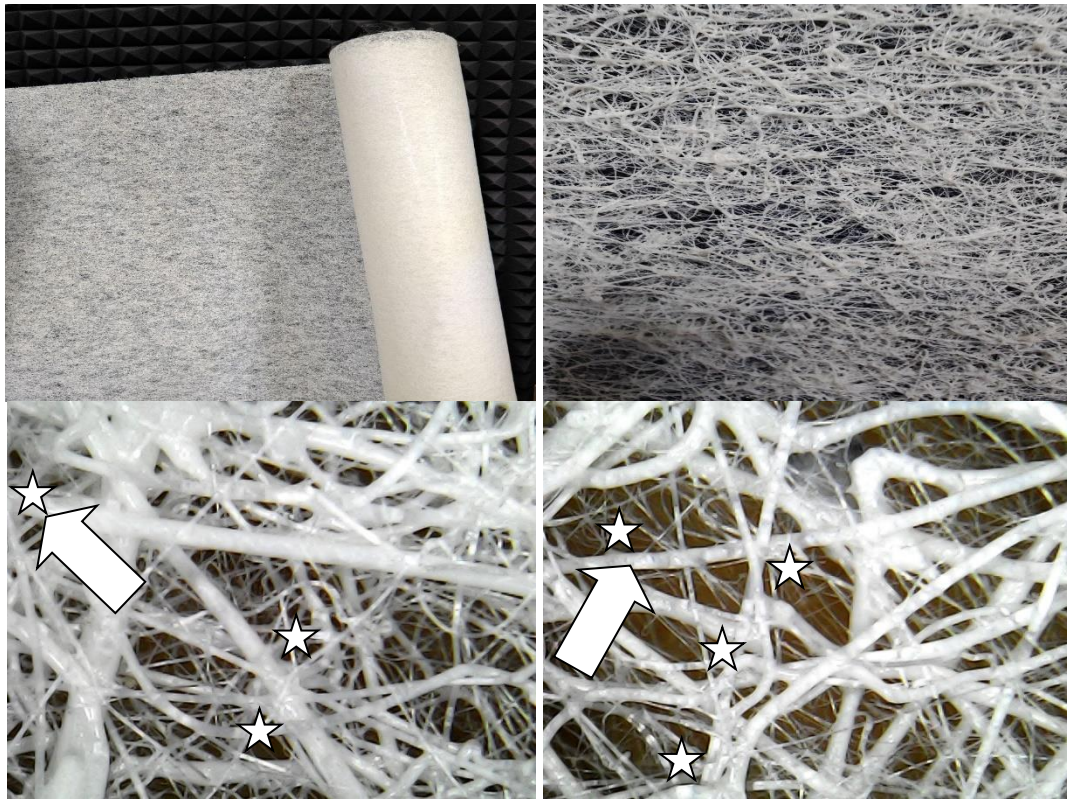


Рисунок 1 – Структура ВПМ (указаны места локализации включений ПФС в волокнах ПП)

Таблица 1 – ЭППЗ образцов ВПМ

Обработка в коронном разряде	Значения ЭППЗ, мкКл/см ² , при различном содержании ПФС		
	10 %	20 %	35 %
До обработки	-0,34	-0,18	-0,27
После обработки	-4,43	-5,4	-6,14

Выводы

Полимерные волокнисто-пористые материалы демонстрируют возможность создания в них электретного состояния. Обнаруженный эффект роста ЭППЗ с увеличением содержания наполнителя может быть связан с межфазными процессами, происходящими на границе раздела частиц ПФС с окисленной фазой ПП. Перспективным направлением исследований является разработка рецептурных составов композитных материалов для технологии melt blowing, в которых возможно создание регулируемого электретного состояния.

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GETTING A FUNCTIONAL MILKSHAKE WITH HERBAL SUPPLEMENTS

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Abstract

In the article studies have been conducted on the possibility of using of whole milk with plant components to create technology for new types of whipped products. As a result, fortified milkshakes with plant components have been developed. The assortment is represented by the following items: lemon and currant, milk and chocolate, vanilla. Vanilla has a specific smell and aroma and recruits the body. Lemon and currant are rich in vitamins and organic acids, which are so necessary in old age. By the amount of vitamin C, blackcurrant takes the fourth place among other plants. Cocoa stimulates the secretion of gastric juice. All samples of drinks were evaluated according to organoleptic indicators. The technological process for the production of milkshakes consists of the following operations: acceptance of milk, acceptance of other ingredients of the product, evaluation of their quality, milk pasteurization, milk cooling, syrup preparation, syrup pasteurization, mixing with eggs, stabilizer preparation, mixing pasteurized milk with a mass fraction of fat 3.5% with components, homogenization, whipping the mixture, cooling the cocktail, bottling the finished product, packaging, labeling the finished product, storage of the finished product.

Keywords: milkshake, herbal supplements, technological process, formulation, milk, dairy

The health of each person, and accordingly the nation, is determined by a typical diet. Food supplies the human body not only with the energy necessary for normal functioning and life, but also with the necessary nutrients that perform a number of important functions. The most important of them is the prevention of a number of diseases, mainly associated with disruption of the normal functioning of the gastrointestinal tract. Adequate nutrition ensures normal growth and development of people from birth and contributes to the prevention of diseases, increased efficiency and prolongation of a full life in adulthood [1].

Functional fermented milk products have a high nutritional value, important dietary and preventive properties. They contain in their composition all the main nutrients in a well-balanced form, as a result of which they are easily digested in the gastrointestinal tract and quickly absorbed by the human body. Of great importance in ensuring a healthy diet is the dairy industry, which produces functional milk-based products for determined consumer groups [2].

Based on the foregoing, the actual task of the food industry is to create products that will improve human health. These are functional dairy products enriched with vitamins, dietary fiber, probiotics, prebiotics. The purpose of this work was to research and develop the technology of a functional fermented milk product with herbal supplements.

A cocktail is a drink obtained by mixing several components. Cocktails are varied as alcoholic (containing one or more ingredients containing alcoholic beverages) and non-alcoholic ones. Non-alcoholic and alcoholic cocktails are popular in every corner of the vast globe, and each country has its own traditional drink, as well as a whole culture of its drinking [3].

Some types of cocktail are used as an aperitif, some are served with fruit snacks, others serve as an addition to desserts, and some can even be an independent course: not only a refreshing drink, but also a full meal.

A variety of cocktails is amazing, and their assortment is growing every day. But first of all, attention should be paid to non-alcoholic species, since they are allowed in any age category and in almost any organism, which means they are the most commonly used. Various non-alcoholic drinks, which can satisfy the most delicate taste, are becoming very popular among the population. One of the leading places among them is occupied by dairy soft drinks - cocktails. The main prescription component of milkshakes is milk or dairy products [4].

Milk and dairy products are universal, diverse and everyday food. Human activity, health, resistance to adverse environmental factors to a large extent determines the nature of nutrition. Improper nutrition leads to various diseases [5]. There are diseases caused by malnutrition and overnutrition, metabolic illnesses. In this regard, scientists have determined the physiological needs of the body in nutrients and products. The scientifically substantiated daily intake of milk and dairy products (cottage cheese, cheese, etc.) is about 1 liter (in terms of milk) for adults and 0.5 liter for children. A special place in the organization of a balanced diet belongs to dairy products with fruit fillers. The latter makes it possible to obtain dairy products with pleasant taste and increase the biological value of dairy products by additionally enriching them with a complex of vitamins, including ascorbic acid (vitamin C) [6], as well as other biologically active substances that are found only in plant products [7]. Cocktails take significant place among these dairy products with high biological value including fruit soft drinks. Everyone should be able to choose for themselves milkshakes that meet the requirements of adequate nutrition, their physical needs, tastes and habits.

In this regard, studies have been conducted on the possibility of using of whole milk with plant components to create technology for new types of whipped products. As a result, fortified milkshakes with plant components have been developed. The assortment is represented by the following items: lemon and currant, milk and chocolate, vanilla.

All samples of drinks were evaluated according to organoleptic indicators. The main physical and chemical indicators of the quality of milkshakes are provided for by GOST R 53914-2010. The research results of organoleptic and physico-chemical indicators are presented in table 1.

Table 1

Organoleptic and physico-chemical characteristics of the ready-to-eat cocktails

Indicator	Lemon Currant Cocktail	Milk Chocolate Cocktail	Vanilla Cocktail
Color	Light blue	Chocolate	White
Consistency	Homogeneous throughout the mass, moderately thick	Homogeneous throughout the mass, moderately thick	Homogeneous throughout the mass, moderately thick
Taste and smell	Pleasant, sweet taste with the smell of lemon and currant	Pleasant, sweet taste with the smell of chocolate	Pleasant, sweet taste with vanilla flavor
pH	6.7	4.87	6.1
Titrate acidity, °T	21	18	17

Nutrition value per 100g of product in table 2.

Table 2

Nutritional value per 100 g of product

Cocktail	Protein	Fat	Carbohydrates	Energy value, Kcal
Lemon Currant	5.74	3.5	24.23	151.4
Milk Chocolate	10.2	3.5	11	116.3
Vanilla	11.18	3.5	12.14	124.8

The technological process for the production of milkshakes consists of the following operations: acceptance of milk, acceptance of other ingredients of the product, evaluation of their quality, milk pasteurization, milk cooling, syrup preparation, syrup pasteurization, mixing with eggs, stabilizer preparation, mixing pasteurized milk with a mass fraction of fat 3.5% with components, homog-

enization, whipping the mixture, cooling the cocktail, bottling the finished product, packaging, labeling the finished product, storage of the finished product [8]. Milkshakes are stored at an air temperature in the chamber in the range from 2 to 6⁰C and a relative humidity of 85-90%. Duration of storage is not more than 7 days from the end of the process. The technological process for the production of milkshakes is shown in figure 1.

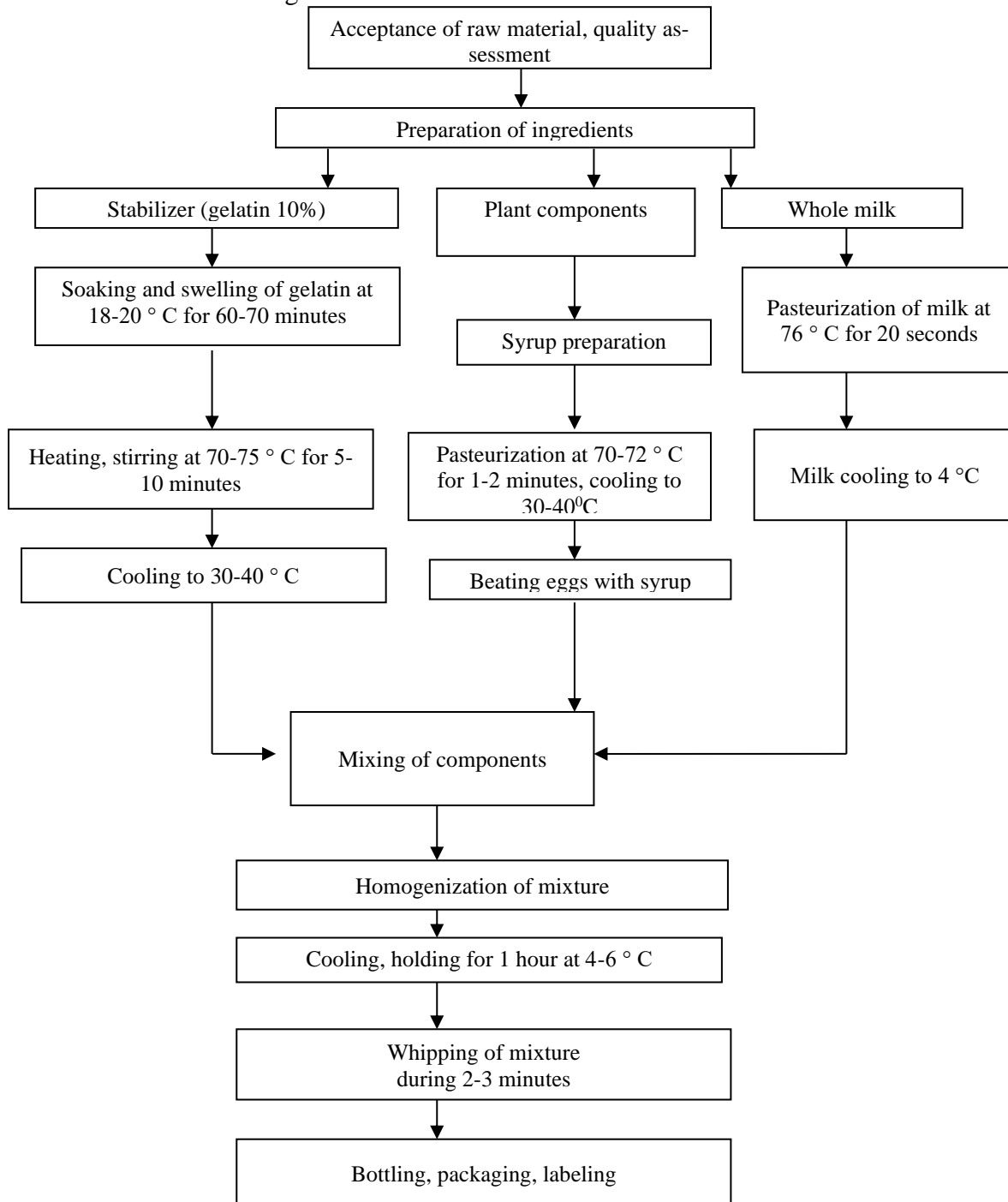


Figure 1. The technological scheme of the production of a milkshake

When developing recipes for milkshakes, it is important to select plant components for qualitative and quantitative characteristics. The analysis of numerous milkshake recipes made it possible to select the most rational plant material. These are cocoa powder, vanillin, currants and lemon. The needs of different population groups in the required amount of nutrients were taken into account. Milkshakes are especially popular with children. Both young people and older people like them, so a chocolate cocktail was developed for children, vanilla for young people, lemon and currant mixture for elderly people. Chocolate is very much loved by children; in addition, it is useful for a young body. Vanilla has a specific smell and aroma and recruits the body. Lemon and currant are rich in

vitamins and organic acids, which are so necessary in old age. By the amount of vitamin C, blackcurrant takes the fourth place after the green fruits of walnut, rose hips and actinidia. Blackcurrant berries have a vitamin, anti-inflammatory, diuretic, tonic, diaphoretic effect; stimulate the digestive tract and metabolism in the body. The combination of a wide range of substances useful to the human body makes lemon an indispensable food product and a valuable medicinal and cosmetic product. After all, a rich set of vitamins is what a person always lacks for productive activities. Cocoa stimulates the secretion of gastric juice. According to its nutritional value, cocoa is one of the first places among food products. The introduction of plant components into milkshakes increases their vitamin value and the role of cocktails in the fight against the development of latent forms of vitamin deficiency, which can contribute to the formation and development of a number of pathological conditions - atherosclerosis, cardiovascular diseases, neurosis and stressful conditions. The dangers of hidden forms of vitamin deficiency are especially for people predisposed to overweight, as well as older people. Chicken eggs are also used in the technology of milkshakes, which allows not only to increase the biological value of cocktails by enriching them with vitamins and minerals, but also to obtain stable foams due to the natural stabilizer - lecithin. Egg yolk is a natural concentrate of lecithin. Its content in the yolk reaches 6%. Lecithin is not only an excellent stabilizer. This is one of the most valuable biologically active substances that perform a number of important functions in the life of the human body. It determines the permeability of the membranes of all living cells of the body, promotes the growth of the young body, normalizes fat metabolism and cholesterol metabolism, is an easily accessible source of phosphorus. Thus, egg cocktails are extremely healthy and tasty drinks provided using of fresh eggs. As fortification, ascorbic acid is used. Vitamin C a water-soluble vitamin is synthesized by plants (from galactose) and animals (from glucose). It affects various functions of the body, increases resistance to adverse effects, promotes regeneration. The main function of vitamin C is to strengthen the immune system. And, first of all, it helps leukocytes, which spend a supply of vitamin C in the fight against diseases.

As a result of extensive sociological studies, it was revealed that the nutritional structure of the population of Kazakhstan is characterized by a continuing decrease in the consumption of the most biologically valuable products. The nutritional value and physiological effect of cocktails is determined by their chemical composition, which, in turn, is associated with the content of certain prescription components. It is known that aerated masses are used in functional nutrition for the treatment and prevention of a variety of diseases. Experts explain the functional properties of aerated products by the fact that approximately 10 times more oxygen enters the tissues through the stomach than through the lungs. One serving of such a product replaces 3-4 hours in fresh air, and oxygen-enriched blood activates the work of internal organs. From the above it follows that the development of new types of aerated products is relevant. The results of regular mass surveys clearly indicate the extremely inadequate intake of vitamins, a number of minerals and microelements for the most part of the children and adults, and they are absolutely necessary for the normal metabolism, growth and development of the body, and protection against diseases and adverse environmental factors, reliable provision of all human life functions.

The formulations of aerated milk products are presented in Table 3.

Table 3

Milkshake Recipes	
Raw materials	Raw material consumption, kg
1	2
Lemon and currant cocktail	
Pasteurized milk with fat content 3.5%	624.8
Lemon juice	23.4
Eggs (pieces)	125 (2907)
Vanillin	2.5
Currant juice	118.7
Sugar	100
Gelatin 10%	15.55

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Ascorbic acid	0.05
Total	1010
Milk chocolate cocktail	
Pasteurized milk with fat content 3.5%	649.5
Serum	108.3
Cocoa powder	32,5
Sugar	64.9
Vanillin	3.2
Eggs (pieces)	86.6 (2014)
Gelatin 10%	64.9
Ascorbic acid	0.1
Total	1010
Vanilla cocktail	
Pasteurized milk with fat content 3.5%	559.3
Serum	111.8
Sugar	89.5
Vanillin	3.5
Eggs (pieces)	178.7 (4156)
Gelatin 10%	67.1
Ascorbic acid	0.1
Total	1010

Thus, the organoleptic properties of the milkshake, forming consumer demand, and physico-chemical parameters: density, acidity, effective viscosity, dispersion of the air phase, etc., which meet the requirements of this assortment group of products, are determined.

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