



## Obtaining a Quality Product by Eliminating Defective Factors in the Storage of Cocoon Raw Materials

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**Abstract:** *in this article, certain parts of the reared living cocoon are damaged, during picking, bringing to the cocoon industry, pretreating, transporting and storing. Especially during long-term storage of cocoons, chemical changes of the cocoon and cocoon skin as a result of changes in the external environment, cooling in winter days and warming of the sun in summer months, the impact of various insects on the cocoon skin, and the pigment spots formed in the shell layer affect the physico-chemical properties of the threads in the defective parts of the cocoon causes the properties to change.*

*The purpose: Our republic aims to obtain high-quality raw silk by modifying the factors that cause defects in the storage of cocoon raw materials, which are important for the textile industry, on the basis of surfactants from local secondary raw materials. It was recommended that SFM treatment in order to improve cocoon storage and spinning processes and to increase the amount of raw silk obtained from them.*

*Methods: Experiments were conducted in the main cocoon of Andijan district, Andijan region. As a result of the research, the waste of the "Biokimyo" plant (bardo and sive oil) and the surfactant synthesized in laboratory conditions were used. Before the initial processing, the cocoon was subjected to a technological process by modifying the cocoon with new chemical preparations Surface-active substance (SAS). There are hydroxyl and carboxyl groups close to the substances contained in the prepared Surface-active substance (SAS) cocoon. The environment of the substance is neutral and non-toxic, while the substance contains amino groups that are not eaten by crustacean beetles and insects. It does not have a negative impact on the health of workers working at the cocoon enterprise.*

*Results. By rationally using the production capacity of cocooning and sericulture enterprises and improving their stable operation, as well as improving the quality of cocoons by modifying surface activators, the silk yield can be increased from 28-29% to 42-45% and the amount of quality cocoons in the total dry cocoon volume from 81-88% to 95 -Up to 96% is achieved. Modification of the cocoon by reducing the factors that cause defects in its storage, increased cocoon absorption by 2.8 - 3.04%.*

*Conclusion: Based on the analysis of the obtained results, it is appropriate to use surface-activating substances obtained by synthesizing the waste of the local secondary raw material "Biokimyo" to eliminate the factors causing defects in the storage of cocoon raw materials.*

**Key words:** Cocoon, crustacean, bardo, silkworm oil, surfactant, silkworm, raw silk.

## INTRODUCTION

Our republic occupies a leading position in the production of raw materials important for the textile industry in the region - cotton, natural silk, hemp, wool, etc. In addition, the produced product is used for technical purposes in other areas of industry [1]. As the President noted, it is necessary to export not cheap raw materials to the foreign market, but high-quality goods. In order to expand the possibility of export and enter world markets, it is first necessary to develop joint enterprises that produce finished products based on the processing of valuable raw materials. Together with foreign partners, it is necessary to establish modern compact enterprises and bring them closer to the villages, which are sources of labor resources [2]. In particular, the silk industry is one of the major production sectors of the Republic of Uzbekistan and occupies one of the leading positions in the world in terms of cocoon cultivation and processing. It follows that the products of this industry will create a large source of export for independent Uzbekistan. In order to further deepen economic reforms in the field of cocooning, modernize the enterprises of the republic's cocooning network and create favorable conditions for the establishment of new productions, increase the volume of finished products competitive in the world market and expand their types, "On measures to organize the activities of the Uzbek cocoon industry association" and 2019 Decision PQ-4411 dated July 31 "On additional measures for the development of deep processing in the cocoon industry" [2] scientific approach serves to a certain extent the implementation of tasks defined in other regulatory legal documents related to the activity. Currently, cocoons are stored in warehouses of the cocoons to ensure the continuous operation of the cocoons. From the outside, this is considered a simple situation, but it is very important for technological processes. Because as a result of cocoon storage, under the influence of the environment, metrological conditions and various insects, various other factors, the structure of the cocoon layer is damaged, the thread layers are damaged, and the sericin wears out. . In the experiments, when the storage period exceeds 11-12 months, it was shown that the yield of raw silk decreases by 6.5%, the volatility decreases by 7.1%, and thus the yield of silk in the cocooning process increases by 1.6%, and the yield by 1.3%. As a result of long-term storage of the cocoon, it is affected by all kinds of insects and rodents. The appearance of carnivores is caused by the pollution of the environment of the enterprise. When one of the pests of cocoons, An Aremus slavipes, which has appeared in the warehouses of the cocoon industry, was studied [3], this cocoon is oval in shape and has white, yellow, and black spots on its body. Not only do they destroy the cocoon, but the cocoon moves into the silkworm's cocoon and turns it into powder, damaging the cocoon shell over time. The origin and reproduction of cocoon eaters have caused great damage to cocooning, and it has been found that they are produced only in primary processing bases and enterprise warehouses. Hair-eaters develop in the decaying excrement of the mushroom or in the spots where defective cocoons have been cleaned, in bird nests and their excrement. It was found that Dermester Yandarius, O.masulatus and Srischie are particularly dangerous for cocooning when 11 skin-eaters were examined. Worms of the Dermester type make their way and make nests by eating the wooden parts of buildings and sheds. There, he first turns into a mushroom, and then flies into a beetle. It has also been found that worms have gnawed into the concrete and mortar parts of the building [4].

## METHODS

In order to protect cocoons from pests in cocooning and cocooning, first of all, before receiving a new crop in protective institutions and cocoon preparation points, warehouses and enclosures should be repaired, holes and cracks should be closed. All places where cocoons are stored, surrounding areas should be disinfected with 80% technical chlorophos (1.9-2.3 gr/m<sup>2</sup>) or 50% chemical solution carboxyl (1.5-2 gr/m<sup>2</sup>) or 50% chemical solutions. However, these solutions should be prepared on specially equipped machines, OXV-14 or OVX-28, EVS-3 manual sprayers should be used for cocoon processing on the day of preparation of the solution. Especially nowadays, due to the scarcity of these chemical preparations, i.e. taking into account that they are brought from abroad, the work to be done in this regard remains undone. According to scientific data, if the substance contains an amino group, it has been determined that the bark beetle does not contain such substances. In order to protect cocoons from various pests in our scientific research work, we used "Biokimyo" factory

waste (bardo and sivush oil) and surfactant synthesized in laboratory conditions. There are hydroxyl and carboxyl groups close to the substances contained in the prepared SFM cocoon. The environment of the substance is neutral and non-toxic, while the substance contains amino groups that are not eaten by crustacean beetles and insects [5,6,7]. It does not have a negative impact on the health of workers working at the laddering enterprise.

## RESULTS

Experiments were conducted in the main cocoon of Andijan district, Andijan region. Before the initial processing, the cocoon was subjected to a technological process by modifying the cocoon with new chemical preparations Surface-active substance (SAS). Dried cocoons were placed in 30 kg hemp (rovendux) bags and sent to warehouses of the cocooning enterprise for storage. The cocoons sent for the experiment were kept for 11-12 months in the warehouses of the cocooning enterprise of the limited liability company "Ipakchi" of Andijan city. As a result of the research, when compared to the control, it was found that the cocoons were damaged by shell-eating beetles by 60-67% under the influence of chemical preparations in the experimental variants. When the cocoons treated with chemical preparations (SFM) were kept in quarters at 5 kg, 2.8-3.04% increase in cocoons was achieved due to modification compared to the control cocoons.

## DISCUSSIONS

Cocoons are stored in warehouses of the cocoons to ensure continuous operation of the cocoons. Although this may seem simple, it is very important for technological processes. In order to prevent the destruction of the structure of the cocoon layer under the influence of various factors as a result of the storage of cocoon raw materials, field scientists L.Yu.Yunusov, X.A.Alieva, A.O.Bakhriddinov, It is widely covered in the works of N.M.Islombekova and others [8,9,10,11,12,13]. The external environment greatly affects the viability of the silkworm, its productivity, cocoon wrapping, the quality of cultivated cocoons, and the technological properties of the cocoon skin.

## CONCLUSIONS.

Rational use of the production capacity of silk enterprises and improvement of their stable operation, first of all, increase the quality of cocoons, increase the yield of silk from 28-29% to 42-45% and the amount of quality cocoons in the total dry cocoon volume from 81-88% to 95-96% based on. In the maximum use of cocoons grown in our republic, the modification of cocoons before the technological process of preliminary treatment with new SFMs synthesized on the basis of the waste of the "Biokimyo" plant - the residual fraction and sive oil, by reducing the factors that cause defects in its storage, it was possible to increase the cocoon yield by 2.8 - 3.04%.

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