



## **ANALYSIS OF THE PECULIARITIES OF THE APPLICATION OF TANIDES IN THE PRODUCTION PROCESS AND QUALITY INDICATORS OF RAW MATERIALS IN THE PRODUCTION OF SHOE**

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### **Annotation**

The article describes the method of tanning in the production of lining leather and the peculiarities of using tannins. The hardness of leather tanned by the chrome and chromium-tannin method was determined and the tanning process was improved due to the use of tannins. By determining the quality indicators of artificial raw materials with local raw materials in the production of shoes, the possibilities of their use in production and for consumers are analyzed.

**Keywords:** eco leather, tanning process, vegetable tanning agents, tannins, pomegranate peel, chrome tanning method, hardness.

### **Introduction**

The share of costs for raw materials and basic materials in the cost of production of textile enterprises is high. The production of this industry is characterized by high consumption of raw materials. At some enterprises, the consumption of raw materials is 70-80% of the cost of production.

The Action Strategy for the Further Development of the Republic of Uzbekistan for 2017-2021, including "...improving the competitiveness of the national economy, reducing energy and resource intensity in the economy, developing fundamentally





[1]. In the implementation of these tasks, an important role is played by the production of new types of products with the necessary technological and design parameters, of high quality and obtained by processing waste.

For 11 months of the current year, 29 million hryvnias. More than 12,880 tons of leather and leather goods worth \$796,000 were registered for export. This year, our country exported leather and leather goods to Pakistan, Bulgaria and Tajikistan for the first time.

Antonio Couture was granted the right to export leather goods produced by Angren Sharm Invest to all European markets. The Italian company is also promoting Uzbek products to European markets.

Cultivation is the most important process in leather production. The interaction of additives introduced into the dermis with the functional groups of the protein is enhanced, as a result of which its structure changes, cross-links are formed between adjacent chains, which leads to irreversible changes in the properties of the dermis. In this case, the skin becomes leathery.

Chromium salts are commonly used as a chemical in the fermentation process. Almost 90% of tanneries use this substance. Other fermentation methods such as vegetable additives (tannins), minerals, aldehydes, and lubricants are also used in the fermentation process [4-6].

Plant enhancer cultivation consists of adsorption of tannins on the dermis, diffusion of tannins into the thickness of the skin, and binding of tannins. Tannins are found in the skin both in free form and in a state bound by various forces. At the same time, they behave differently in relation to washing with water and alkalis [7].

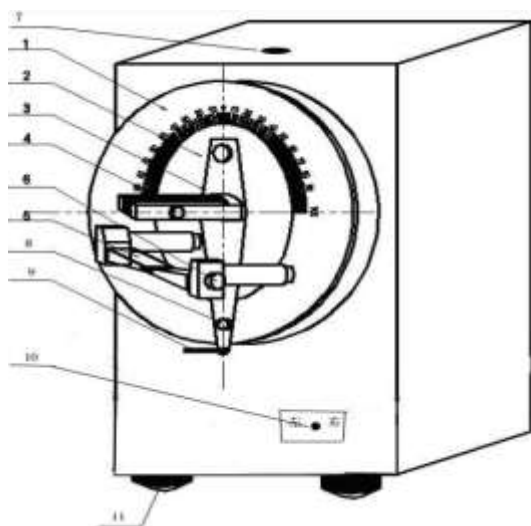
The effect of herbal supplements on skin formation depends not only on the amount of bound additives, but also on the characteristics of their interaction with semi-finished products with collagen and chromium additives and the ability of amino groups and collagen-bound chromium complexes to bind to collagen peptide groups, forming hydrogen bonds [8].

In general, tanning with tannins gives the leather high hardness, impact strength, dimension and resistance to dimensional changes under the influence of variable humidity [9]. However, large particles of tannins lead to a decrease in the amount of protein as a result of intercellular absorption and exhibit low resistance to degradation. Tannins also have a bactericidal and fungicidal effect due to the accumulation of phenolic derivatives in them.

The use of herbal supplements or combined methods of augmentation in the augmentation process not only reduces the harmful effects of the augmentation process on the environment, but also allows the production of eco-leather.



In connection with the above, in the course of the study, in the process of obtaining lining leathers from sheepskins, traditional chromium plating and the combined chromtanide method were used, and the primacy of elevated leathers was also determined. The YT-TDY500 instrument was used to determine virginity.



1. Ensuring disk speed
2. Corner disc
3. Pendulum
4. Holder (for test piece)
5. Roller conveying the sample to the right and left
6. Screw motion control
7. Smoothing device
8. Mounting pin
9. loading
10. Power button
11. Adjustable base

Figure 1. YT-TDY500 Virginity Tester

Rigidity is a property that determines the elasticity of a deformable sample. The more virginity, the less it changes its length under the influence of a certain force. However, the virginity of the lining leather should enhance its textile properties, so the additives used in the manufacturing process of exquisite shoes were chosen accordingly, and the results shown in Table-1 below were achieved.

(Table 1). Influence of the reaction of additives used in the production of lining leather from sheepskin on the finish of the finished product

Nº	Name of additive used	additive approach,%	magnification method	stability
1.	Chrome addition	100	Chrome plating	0,2
2.	Chrome Tannid (pomegranate peel)	50 50	Chrome-tannid	0,3
3.	Chrome Tannid (pomegranate peel)	30 70	Chrome-tannid	0,2

During the study, the laboratory determined the breathability and virginity of the processed semi-finished product - lining fabric and artificial leather products. The quality indicators of prototypes are given in table. 2. The air permeability of the test samples was determined using samples from 10 different locations on 10 samples in accordance with ASTM D737 using the YG461E equipment. Due to the fact that the DIN 53887 test is planned to be carried out at least five times, the tests were carried out at the required level and their average values were obtained. The YT-TY500 was discovered in a lab using a virginity meter.



(Table 2). Quality indicators of test samples

№	TEST SPECIMEN, TYPE	GENUINE LEATHER	ARTIFICIAL LEATHER	SHELL
1	BREATHABILITY. CM <sup>3</sup> /CM <sup>2</sup> *S	0.079	0.049	0.069
2	SUSTAINABILITY. MN*М	4	2	3.6

An analysis of quality indicators showed that the breathability of natural leather is 38.7% higher than that of artificial leather. This indicates that the health of people who need to use does not lead to negative consequences due to the high breathability of natural leather. The fact that the virginity index is equally different is indicative of the long-term performance of genuine leather due to its low flexural strength.

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