

TECHNOLOGY OF FATLIQUORING KARAKUL ON THE BASIS OF USED OILS

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Annotation

The article presents the technology of emulsion fattening of karakul based on a purified waste oil product and an emulsifier. The properties of astrakhan fur have been improved and an inexpensive fatliquoring composition has been obtained.

Keywords: karakul, used oil, emulsion fatliquoring, emulsifier, fatliquoring substances.

It is known that the processing of fur skins is one of the oldest human crafts and is used as a traditional craft in different countries of the world. Recent archaeological finds and analyzes have shown [1] that the use of leather and fur for clothing dates back 120-90 thousand years. Important factors affecting the quality of fur skins can be divided into factors affecting the quality of fur skins during their life cycle and processing of fur skins. Fur is recognized as a rare material with its unique water resistance, heat-retaining capacity, hygienic properties and natural appearance [2].

When evaluating fur skins, depending on the type of raw material, the area of the skin, gender, color, and quality indicators of the hairline are taken into account. In particular, the quality of the hair is important [3], including density, shine, softness and elasticity, as well as the purity of the color.

The quality of a fur product depends on the processing method. The last process of liquid processing is fatliquoring, in which the semi-finished product acquires the properties of gloss, hydrophobicity, softness and elasticity due to the introduction of fats into the skin tissue and hairline.

However, the excessive use of fattening materials leads to an increase in the mass of the finished product, felting of the hairline, environmental pollution due to an increase in

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the amount of fattening substances in wastewater. Therefore, the correct choice of fattening materials increases the possibility of improving the quality of the fur.

In the research work, the waste oil obtained by repeatedly frying fish in sunflower oil was purified with an adsorbent and used in the process of fattening astrakhan in the presence of an emulsifier. Used oil was obtained from places where fish is fried for public consumption.

The spent and refined oil was emulsified for use in the emulsion fatliquoring process. To obtain an emulsifier, used oil was used, but without purification, using NaOH in a molar ratio.

The resulting emulsifier is soluble in water and has the property of emulsifying the oil molecule. Since, the agent that ensures the stability of the emulsion is an emulsifier.

To prepare the emulsion, 50% of purified waste oil and 50% of the emulsifier were taken, mixed in the emulsifier, water at a temperature of 38-40°C was added in 2-3 times. The stability of the emulsion was checked, at which the emulsion did not separate into layers within an hour and was used for fattening astrakhan. Based on the following methodology, the process of emulsion fattening of astrakhan fur was carried out:

Table 1. Parameters of the fatliquoring process

No	Process name	Fluid ratio	Temperature, °C	Duration, hour	Reagent concentration, g/l	Work order
1.	Fatliquoring	8	38	2	NaCl-2,7; WOP - 0,2; Emulsifier-0,2	Water is poured into the vessel, salt is added. Then the colored astrakhan was added. After 10 minutes, the prepared fat emulsion was added. The launch is rotated for 20 minutes per hour, after the process the semi-finished product becomes durable and has a lasting color.

**WOP- waste oil product*

The fatliquoring composition CMX-M is used in fatliquoring processes under production conditions in the process of fatliquoring karakul in the amount of 0.4 g/l. All other parameters were carried out according to the method presented in the table, without the use of an emulsifier.

According to organoleptic evaluations, astrakhan fattened on the basis of domestic waste oil showed softness, shine and elasticity and did not differ from samples fattened

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on the basis of an imported fatliquor. The composition of the working solution was characterized by relative transparency and the fact that the waste oil processing products were well absorbed by the skin of the fur. In addition, since the domestic fatliquoring composition consists mainly of used oils, it is 4.5 times cheaper than imported fatliquoring material, while CMX-M costs \$2.0, and the domestic product of used oil processing costs \$0.41.

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