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FEATURES OF THE FATTYING AND SUEDE TANNING PROCESS

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Abstract
The range of fats and oils suitable for fatliquoring fur skins is significantly wider than the range of fats suitable for sueding leather. Fat tanning is usually combined with other tanning methods, such as pickling, grain tanning with aluminum alum, chrome tanning, formalin tanning, quebrach tanning, etc., and therefore this process is never performed independently. It consists of tanning the skins according to the following procedure: Using another method, the hide is coated on the flesh side with fat or oil, or even better, a fat emulsion, then left to dry for 6 to 12 hours, followed by the usual processes.

Keywords: Leather sueding, pickling, fat emulsion, emulsifier, egg yolk, soaking and fleshing.

Introduction

A fat emulsion is a solution of a fatty substance in water, evenly distributed in the form of tiny particles. In some cases, fatty substances cannot be evenly distributed in water at all, and in such cases, an emulsion is said to not form. If an emulsion does form, but quickly separates—that is, the fat floats on top of the water if it is lighter than the water, or collects under the water if it is heavier—we are dealing with an unstable emulsion. If the emulsion does not separate for some time, we are dealing with a stable emulsion, fit for use. The smaller the particles of fatty substance distributed evenly in water, the more stable the emulsion and the longer its lifespan. Smaller particles of fatty substance in the emulsion are convenient for us, besides, because the impregnation of the flesh side with emulsion will in this case proceed much easier - smaller particles will penetrate between the fibers of connective tissue more quickly. Usually, fatty substance does not form an emulsion directly; this requires the introduction of an auxiliary substance, the so-called emulsifier. Only after the addition of this substance does emulsification occur, i.e., uniform distribution of particles of fatty substance in water. Without an emulsifier, the emulsion either does not form or separates very quickly. To increase the stability of the emulsion, ammonia is usually added. In leather tanning, emulsifying agents are soft soaps, egg yolk or sulphonated oil. Mineral oil, Added in small quantities, egg yolk also promotes emulsification.

Particularly noteworthy is egg yolk, which also has tanning properties. It contains 16% protein, 16% fat, 11% lecithin, 2% chosterol, and 1% mineral oil.

These substances are found in raw hide, and they soften and protect the skin of animals. However, during soaking and subsequent operations that raw hide undergoes during tanning, it loses a significant portion of these substances, and therefore, incorporating them into the leather in the form of egg yolk yields very good results.

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Egg yolk is usually added to fat emulsions. However, to avoid albumin coagulation, the yolk should not be heated above 37°C.

In fur dressing, egg yolk produces exceptionally good results. After pickling or other tanning, the flesh side is coated with a concentrated solution of egg yolk and sulfonated oil, dried, and finished as Usually; this results in exceptionally soft flesh, and its strength is significantly increased.

Egg yolk can also be used directly in the tanning bath. For example, on skins with delicate flesh, soft, elastic, and fairly strong leather can be obtained as follows:

Soak and flesh as usual; then, a diluted old alum solution is poured into the tanning drum and the skins are rotated in it for 2 hours; then, a solution of aluminum and chrome alum and table salt with a small addition of formalin is added and the skins are rotated again for 3 hours; then, the egg yolk solution is added and the skins are rotated again for 2 hours. The temperature in the drum after adding the egg yolk should not exceed 33-35°C. The skins are then centrifuged, dried, and finished as usual.

Despite the relatively high cost of materials and energy, this method replaces all manual work with namaz and significantly speeds up Dressing: the end result is significantly cheaper than the spreading method.

Low-sulfured oils are easily soluble in water and provide an excellent material for fatliquoring and tanning.In fur dressing, egg yolk is an excellent fatty substance, which is why we've discussed it in some detail.Suede tanning involves tanning with various fatty substances. Fish oil, seal oil, hoof oil, bone fat, linseed oil, and a number of other fatty substances of both animal and plant origin are used as tanning fatty substances.

These substances penetrate the leather, oxidize there, and, in their oxidized state, chemically react with the tanning agent.

References

1. Rano Nazhmiddinovna Niyazova. "Ecological and operational properties of concrete skins based on synthetic fatty acids." Science and Education 2.12 (2021): 347-352.

2. Rano Nazhmiddinovna Niyazova. "Fattening of collagen fibers of skin tissue." Editor-in-Chief: Sayranbek Makhsutovich Akhmetov, Doctor of Technical Sciences; Deputy Editor-in-Chief: Rasul Magomedovich Akhmednabiyev, Candidate of Technical Sciences; Members of the Editorial Board (2021): 28. 4. 3. R. N. Niyazova. "Interaction of fattening agents with collagen." International Journal of Advanced Technology and Natural Sciences 2.2 (2021): 55-59.

4. Rano Nazhmiddinovna Niyazova. "Viscosity and surface activity of sulfated synthetic fat." Science and Education 4.6 (2023): 184-188.

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