INTERACTION OF ALDEHYDES WITH ORGANIC COMPOUNDS-PLANT ENHANCERS

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Annotation *In the article, the fur industry has increased levels of aldehydes.The interaction with molecular plant enhancers has been studied: quebracho, mimosa and glutaraldehyde have been obtained as plant enhancers. We used 20% aqueous solutions of glutaraldehyde, a urea-formaldehyde oligomer modified with acrylic acid and additives. The study used 50 ml of an enhancer solution with a concentration of 0.25% (in terms of enhancer), and then studied the process with laser treatment to intensify the process.*

Key words: *quebracho, mimosa, glutaraldehyde, plant enhancers, urea-formaldehyde oligomer.*

Currently, aldehydes are not very widely used in the fur industry. The use of aldehydes in combination with high-molecule plant additives is very promising.

As a result of their interaction, not only does the unbound high-molecule plant transfer the acid to its bound state, but also additional acid compounds with a high propensity for collagen are formed. From this, the mochevina-formaldehyde oligomer, which is modified with glutar aldehyde with acrylic acid, as well as the interaction characters in the Orsi with tannides of some plant additives, have been studied.

The study of the nature of the interaction of plant tannides with glutar aldehyde [1, 2, 3], an acrylic acid-modified mochevina-formaldehyde oligomer [4-5] presents some difficulties due to the extreme complexity of their structure.

In this study, quebraxo [6], mimosa [7, 8] and other tannids of the variety were also selected as plant additives. Their compatibility with aldehydes was made such a choice because of their relative and occasional use in the leather industry.

For this, the necessary analytical and additive solutions were prepared according to certain methods [9].

Aqueous solutions of 20% of mochevina-formaldehyde oligomers and additives modified with Glutar aldehyde, acrylic acid were applied.

The presence of reactively capable OH, —COOH, H— phenol ringed groups in plant acidifiers, and —C(H)=O= groups in aldehydes were overlooked in their involvement in the formation of various bonds, as well as the possibility of forming chemical bonds with research objects-acidifiers and glutar aldehyde.

In this, a precipitate was formed when solutions of additives and aldehydes were mixed. The precipitate was mixed with the solutions in 1:1 proportions. The stability of the resulting precipitates to the action of solvents after 1 day after mixing was checked. The study applied a 50 ml solution of the concentration of 0.25%(when calculated by converting it to an additive) and then laser treatment with the aim of intensifying the process [10].

The results of the study are presented in Table 1.

Table 1.

Additive	Amount of sediment, %							
	Molten part under impact						Парчалан-маган	
	H_2O		H_2O+ CH_3—C(O)—CH_3		H_2O+HCl			
	Initial	Laser treatment	Initial	Laser treatment	Initial	Laser treatment	Initial	Laser treatment
Quebracho	69,84	65,23	14,23	16,18	9,59	11,43	6,34	7,16
Quebraxo+GA	66,12	61,41	16,74	17,08	9,52	12,38	7,62	9,13
Quebracho+AKMFO	65,23	59,37	16,21	17,25	10,38	13,17	8,18	10,21
Mimosa	68,91	65,62	15,68	16,56	10,27	11,46	5,14	6,36
Mimosa +GA	68,13	65,50	15,38	16,86	10,77	11,51	5,72	6,13
Mimosa + AKMFO	67,17	64,08	16,08	15,23	10,41	12,35	6,24	8,34

Stability of sediment produced by laser irradiation with aldehydes to solvents and acids

Table 1 shows that bicomponent admixture stability and robustness bonds show that herbivores quebracho and Mimosa have pure water solubility of 69.84 and 68.91% respectively, while mochevina-formaldehyde

oligomers modified with glutar aldehyde and acrylic acid are 66.12 (59.37) and 68.13 (64.08) % respectively. In addition, laser beam treatment at the same time by mixing bicomponents was found to be 65.23 (61.41) 59.37va65.62 (65.50) 64.08%, with the solubility of the removable product deteriorating again.

In addition mimosa tannide has been found to form an unstable precipitate under the action of organic solvents and hydrochloric acids.

Quebec extracts of glomerular aldehyde and bilayers of billiard modifications of Langan urea-formaldehyde oligomerular garnet to restore wood.

A water-acetone mixture is usually used when breaking hydrogen bonds from charcoal. It turned out that the mixture of water-acetone in a ratio of 1:1 is effective in our study.

It is also clear that washing the sediment in water, washing the water-acetone mixtures even with a weak (pH=5) solution will cause the remaining gardens to be completely disconnected.

With water, the amount of sediment that remains after washing with a water-acetone mixture and weak solutions of hydrochloric acid (NSI) ensures stability in processing under the above harsh conditions and also indirectly indicates the presence of strong chemical bonds.

The more stable, insoluble, non-decomposing the precipitate, the more solid chemical bonds are formed between collagen+aldehyde+plant additives.

In this case, it is a stable and robust compound that is very difficult to react to water, water-acetone and hydrochloric acids, forming strong hydrogen bonds with the aldehyde carbonyl and the additives phenolini hydroxyl group [11].

Typically, protein substances, when interacting with organic additives, produce much larger particles than the initial ones.

The formation of such particles inside the derma structure is very important when treated with an additive to the fur, while these particles, in turn, show high reactive ability and polyfunctionality when interacting with collagen.

The results of the cited study were convinced that the interaction of aldehydes with organic plant enhancers, but of mochevina-formaldehyde oligomers that modified plant enhancers with glutar aldehyde and acrylic acid, was generally distinct and varied.

As a conclusion, it should be said that plant additive compounds interact with aldehydes, in particular, with bicomponent mixture even in the

presence of a laser in processing, and showed that it is possible to obtain fundamentally different products from the initial components.

In the reaction, the—OH, —COOH, HO— phenol ring, —CH_2- groups of the acidifiers can be involved with the—C(H)=O= groups of the aldehydes.

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