

ECOLOGICAL EMOLLIENTS FOR SOFTENING ETHNOGRAPHICAL OBJECTS ON COLLAGEN SUPPORT

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Rezumat: *Lucrarea prezintă rezultatele experimentale ale proiectului "Tehnici complexe de investigare, evaluare, conservare și restaurare a materialelor colagenice etnografice", Etapa 3/2010, Activitate 3. Elaborare și realizare model experimental a recepturilor ecologice cu calități de conservare preventivă și activă, a obiectelor etnografice din blană și piele, Subactivitate 5. Aplicarea și evaluarea rezultatelor experimentale cu privire la emolieria obiectelor etnografice pe suport colagenic.*

Abstract: *This paper presents the results of experiments, which form part of the "Complex techniques for investigating, evaluating, conserving and restoring ethnographical collagen materials" project, phase 3/2010, activity 3: The drafting and making of experimental sample of ecological softening agents with preventive and active preservation qualities for ethnographical items made from fur and leather, sub activity 5: The application and evaluation of the experimental results regarding the softening of ethnographical items on collagen support.*

Résumé: *L'ouvrage présente les résultats expérimentaux du projet "Techniques complexes d'investigation, évaluation, conservation et restauration des matériaux collagènes ethnographiques", l'Etape 3/2010, Activité 3. Elaboration et réalisation du modèle expérimental des recettes écologiques avec qualités de conservation préventive et active des objets ethnographiques en fourrure et cuir, Sous-activité 5. L'application et l'évaluation des résultats expérimentaux concernant l'émollience des objets ethnographiques sur support collagènes.*

Keywords: *investigation, conservation, ecological emollients, collagenic materials, ethnographic.*

Ethnographic leather is produced by rudimentary means using different methods and tools from one region to the next, resulting in a half tanned leather, with little resistance to time, which becomes brittle over a longer period of time. Therefore the preservation of ethnographic leather cannot involve a single treatment, the differences being very large in terms of the technique of leather production.

Another reason for which the preservation of ethnographic leather is different from other categories of leather heritage objects, is that a large part of these objects, consisting of doublets, sheepskin coats, hunting bags, money pouches, girdles and other, are decorated with yarn, and in the leather treatment process this aspect should

be taken into consideration, the resistance of dyes being tested with each treatment that is to be applied.

Also, the fact that the vast majority of the types of object made of ethnographic leather have fur, gives them a certain distinctiveness with regards to their conservation because the usual treatments cannot be applied on the fleshy side of the leather, due to the fur having to be protected. Additionally, the presence of fur makes this category of assets extremely susceptible to moth attacks, which makes the conservation and restoration of these objects rather difficult.

Within the “*Complex techniques for investigating, evaluating, conserving and restoring ethnographical collagen materials*” project, the Museum of Bucovina made several tests using the softening agents from the table below (see Table 1), the following comparative characteristics being observed:

Table 1. Softening agents E1, E5, E9 and some of their properties

Softening agent	Composition	Consistency at T 24°C	Colour	pH	Smell	Other observations
E.I (base)	Beeswax Wool fat Cedar wood oil Hexane	High viscosity	Bright yellow	5	Medium smell	Slightly translucent The stickiest
E.5	Beeswax Wool fat Cedar wood oil Hexane Hydro alcoholic ginger extract	Extremely high viscosity	Yellow	5	Strong smell	Opaque Very sticky
E.9	Beeswax Wool fat Cedar wood oil Hexane Extract yin- yang	High viscosity	Bright yellow	5	Pungent smell	Slightly translucent Sticky

Before the test on the objects, a characterization of the lubricating products was made. The assets were selected especially, taking into consideration the relevance of the leather support of the objects from our museum’s collections and, in order to avoid risks, it was taken into account that the selected objects should not be of remarkable value.

The majority of the objects selected for the tests are either not in the inventory or without any special value, but representative of the typology for our museums’ collections and have a support of vegetal tanned leather, as it is known that alum-tanned leather suffers unwanted effects when brought into contact with softening agents.

In each case hidden sections were chosen, of limited size, so as not to harm the object in any way. Thus the leather was gently greased, in a very thin layer, on limited

areas, with a cotton swab, the surface being worked as appropriate using circular movements, without however dwelling too much. Where there were unwanted results, the surplus of greasy material was removed from the surface using a clean cotton swab.

Table 2. Softening tests

No	Object	Softening agent	Results	Observations
1	New, soft, vegetal tanned, brightly-coloured leather. Control sample Photo 1	E.1	Brightness. Strongly darkens the leather.	Rapid penetration.
		E.5	Brightness. Darkens the leather.	Rapid penetration
		E.9	Brightness. Strongly darkens the leather.	Intense penetration
2	Shoes Photo 2	E.1 E.5 E.9	Gloss. The leather darkened just a little. Thick leather didn't soften.	The difference between the softening agents was indistinguishable. Thick leather became very dehydrated and matte.
3	Hunting tote bag Photo 3	E.1 E.5 E.9	Gloss. Pleasant aspect, unchanged colour. Medium softening.	The difference between the softening agents was indistinguishable.
4	Vegetal leather Photo 4	E.1 E.5 E.9	Intense brightness. The leather darkened a little and did not soften.	The difference between the softening agents was indistinguishable.
5	Child belt Photo 5	E.5	Appreciable brightness. The leather darkened having a glossy aspect. Medium softening.	The softener gave the leather a glossy and sticky aspect.
6	Girdle Photo 6	E.9	Appreciable brightness. The leather darkened almost indistinguishably. It did not soften.	Because of the thickness of the leather, the softener cannot infiltrate.
7	Horsewhip Photo 7	E.1 E.5 E.9	Intense brightness. The leather darkened just a little. Superficial softening.	The difference between the softening agents was indistinguishable.
8	Bagpipe Photo 8	E.1 E.5 E.9	Intense brightness. The leather darkened a little. It did not soften.	The difference between the softening agents was indistinguishable.
9	Money pouch Photo 9	E.1 E.5 E.9	Brightness. The leather darkened just a little. Superficial softening.	The difference between the softening agents was indistinguishable.
10	Water sack Photo 10	E.9	The softener stains the uncoloured leather and the softening takes place just on the surface.	The leather darkens and needs to be cleaned afterwards.



Photo 1. Tests on new leather (sample)



Photo 2. Softening of shoes (before and after)



Photo 3. Softening of hunting tote bag.



Photo 4. Softening of vegetal leather



Photo 5. Softening of a child belt (before and after)



Photo 6. Softening tests for the girdle



Photo 7. Softening of a horsewhip (before and after)



Photo 8. Bagpipe softening



Photo 9. Softening of a money pouch.



Photo 10. Softening tests for a water sack.

Conclusions

When applied in excess, the softeners tend to create a more or less absorbable layer, with a glossy and also sticky aspect, which dries slowly. In the case of new leather (Photo 11), the softener does not infiltrate into the thickness of the 1 mm item, but it stains and darkens it, the effects being made visible also by the light and opaque aspects of the leather that was used for the testing (Photo 12).



Photo 11. Tests on new leather.

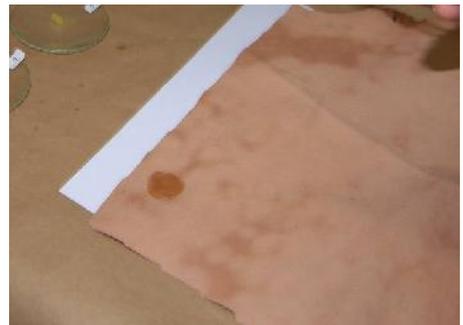


Photo 12. The softened surface immediately after application

After a period of 24 hours in which the leather dried, the intensity of the stain faded, the glossiness diminished, giving a pleasant aspect to the surface, however the colour remained dark compared to the original items made from darker leather, with their own gloss – oiled due to its functional scope at the time when it was used – it was observed that the colour did not change too much but the resulting shine was a little bit disturbing, being unsuited to museum items.

Dark, strongly dehydrated leather, acquires a more healthy aspect and a gloss specific to leather items that through their use are in need of oiling.

Lighter leather, slightly darkens, and if it is not too thick and rigid, acquires a superficial flexibility.

Recommendation

Softeners must be used with much discernment because museum items do not need to have the same character as they did in the period in which they were used, nor do they have to have the same flexibility and softness. If the artefacts have gained rigidity, while preserving their original shape, they can, without any doubt, attend to their duty as museum items. Warped items are brought to their original aspect through controlled hydration that gives the plasticity necessary for the leather to be easily shaped.

However, in case it is determined that a healthier appearance should be acquired, a softener, applied in a very thin layer, can be used, in order not to produce any unwanted risk to the object. Over time, the reaction of the leather should be monitored – keeping in mind the degree of attraction of the dust particles and verified state of conservation of the item through hydrothermal stability analyses.

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