Lanolin Cloak Procedure - Printable Version

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Lanolin Cloak Procedure - marsvigilia - **05-21-2006**

Sorry it has taken me so long to document this.

Some time ago, I set out to saturate a wool cloak with lanolin, the greasy waxy substance that comes from wool. Apparently it helps keep sheep and at one time Romans dry. Dipping the fabric in melted lanolin was excessively greasy, rubbing lanolin in resulted in inconsistent coverage and did not saturate the fabric but seemed to stay on top. I decided to dissolve or emulsify the lanolin in a solvent then soak the cloak and let dry hopefully leaving only lanolin behind. I found that many solvents did not dissolve the lanolin, while many others leave a strong odor that will outlive my grandchildren yet unborn. I also wanted to avoid the linseed human torch phenomenon. I think I found a workable though a bit expensive solution.

According to my research Merino sheep are a fairly greasy sheep and used to be even greasier before breeders decided to breed that out. Merino wool has about 40% lanolin by weight when just sheared. Therefore, this is what I aimed for in my final product.

The following is what I did. I make no representation that it is the best way or even that it is safe. I think it is, but I could be wrong. I discussed my project with both the solvent manufacturer and the poison control office. Neither raised any warning flags regarding toxicity as long as concentration of vapors are avoided, i.e. do it outside.

Materials:
1 pure wool cloak weighing 2 pound 12 ounces
5 gallon bucket with sealing lid
2 gallon bucket with sealing lid
1 gallon Bestine solvent and thinner for rubber cement ($32) (N-Heptane) by Union Rubber, Trenton NJ (WARNING: vapors flammable) usually available in fine art supply stores, but not craft stores.
2 pounds lanolin anhydrous ($24 a pound from a pharmacy special order by the pound, $10 a pound on eBay for 10 pounds, note: donâ€™t get the hydrous it just has water added)
1 cheap $3 plastic sheet to spread out cloak on for drying.
1 day without rain.

I mixed 2 pounds of lanolin with the 1 gallon of Bestine, in the 2 gallon bucket and sealed tightly (must be air tight) and allowed to form a solution over 2 days, swirling and shaking occasionally with lid remaining tightly closed. Most of the lanolin emulsified into a strange swirling yellow soup. The undissolved or unemulsified lanolin remained at the bottom. I then poured the solution into the large 5-gallon bucket leaving the undissolved lanolin behind. I next placed the cloak into the large bucket and attempted to assure that it was evenly soaked through. 1 gallon was just barely enough for my relatively light somewhat open weave cloak. I spread the plastic sheet on the ground and spread the cloak over it. Do not attempt to wring cloak out. Remember that wet stuff is the carrier of the lanolin. If it hadnâ€™t rained, I think the Bestine would have completely evaporated within 3-4 hours. Learn from my mistake, check the weather report first.

The final result was a cloak that was moderately but not excessively greasy. The cloak went from 2.75 pounds to 4.54 pounds, a gain of 1.79 pounds. Lanolin represents 40% of final weight, which was my goal.

By repeating the process, I believe I could increase lanolin to any level required, but I think this is enough for now.. The cloak smells of nothing but lanolin. An unscientific flame test showed some increase in flammability but not nearly as much as I understand you get with some other solvents. I think the increase in flammability is entirely attributable to the wool being saturated with lanolin.

How waterproof is it? That I really donâ€™t know yet. I suspect not very waterproof by modern standards. I started with an open weave wool which probably isn't the first choice for a rain slicker. Also the Romans never had the benefit of plastic/rubber raincoats so their standards were probably lower.

I would love to hear from anyone that tries this, particularly if they find a better way of doing it.

Re: Lanolin Cloak Procedure - Peroni - **05-21-2006**

That is an excellent bit of experimentation marsvigilia!

Let's hope you now have a lot of rain to test out your newly waterproofed cloak!

I guess the easiest way to manufacture a waterproof cloak would be to use unwashed wool, leaving the natural oils in the fleece and spinning the wool yarn from it when it still contains the oils.

I couldn't hazard a guess at the diffculties greasy wool yarn would add to the weaving process though, is there someone on the forum who weaves? Maybe they could enlighten us with the difficulties (if any) this may pose(?)

Regards,

Re: Lanolin Cloak Procedure - tlclark - **05-22-2006**

Where do you get unwashed wool?

Also, Medieval sources suggest boiling wool to make it more waterproof.

This means making the cloaks oversized to compensate for shrinkage.

Has anyone tried this?

Travis

Re: Lanolin Cloak Procedure - Tarbicus - **05-22-2006**

It's nowhere near as good as marsvigilia's method, but there are lanolin solutions for making nappies more waterproof, which involves soaking the item in a bucket for a period of time. There are different products like shampoo, but one of them will impregnate virgin wool with lanolin. It's made by Ulrich NatÃ¼rlich.

Re: Lanolin Cloak Procedure - marsvigilia - **05-22-2006**

Thanks Tarbicus.

I have not tried the Nappy wash solution. I would be concerned that it might get rather expensive for the amount involved. Depending on how greasy a cloak you want, it requires a lot of lanolin be deposited in the fabric. In my case almost 2 pounds of lanolin. about 810 grams. That would be an enormous amount of something designed for washing nappies, plus dry time might be a problem. I didn't even consider putting this cloak in my wife's dryer. I value my life. ;-))

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Re: Lanolin Cloak Procedure - Tarbicus - **05-22-2006**

All the bottle says is 250ml, and I don't have any scales. Besides, it's pre-mixed so probably not much use for comparing weight anyway. I'll see if it re-lanolises a tunic and let you know how waterproof it is.

Re: Lanolin Cloak Procedure - marsvigilia - **05-22-2006**

You could probably contact the manufacturer and find out how much lanolin by weight is in the product. I've found that many companies are more willing to share that kind of information than you would suspect. The trick is sometimes getting past the first line customer service agent. Just be a good Roman. Be persistent and eventually who will overcome the defenses. ;-))

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