

My name is Steven Siegel and I work with a well-established European Leather Chemicals manufacturer. There is a strong collaboration between us to develop suitable (binding) leathers.

We introduced our “partner” to the world of bookbinding who started to read publications from renowned people like Betty Haines; Roy Thomson and Dr. René Larsen in relation with the STEP, CRAFT and ENVIRONMENT projects. It was from this point that we made the request to develop a (calf) leather which would be Sulfur Free and could be Archival as well.

From the literature one can understand that something important happened in leather making between 1830 – 1850 which resulted in a dramatic reduction in the life span of binding leathers.

Introduction of modern tanning methods and Na_2S and sulfuric acid and the atmospheric conditions (SO_2) degenerated leathers at an alarming speed. This in contrast of very much older leathers which still today exist and are not deteriorated (too much).

So, we initiated a project to create a leather that would:

- Be Sulfur Free, using a beamhouse system based on hair removal and not destruction
- 100% vegetable (preferable pyrogallic tannins) tanned without usage of any mineral and synthetic tanning agents and no sulphited or sulphated or sulfonated oils
- Meet the organo leptic characteristics including gold lettering
- Pass the ageing and physical tests ecc
- Be Archival as well
- Be quite sustainable

At this point I can inform you that we have made various productions and “tried out” the market of (USA) bookbinders. The feedback received till now is very encouraging and quite a few have indicated that this “New Calf” is their standard from now on. The standard calf till now used by many is alum based which hampers the organo leptic properties. So, there is a need for a different approach in creating this leather.

For more than 1.5 years we are working & developing “Sulfur Free Full Vegetable Tanned Sustainable & Archival Calf Skin Leather for (book) binding & restoration”.

We do have very positive feedback from the binding community in the USA and UK. Now we wish to introduce this very special developed leather also to various European, UK, and US entities. We are trying to create awareness to (museum) conservators informing and alerting them that such material is available. We are preparing leathers to be tested and certified through FILK in Freiberg (Germany)

What have we done so far internally?

- Quantitative analysis for Sulfur (after solvent extraction on dried leather, sample was concentrated to dryness and then recovered precipitate was oxidized. The result, expressed as sulfur, is obtained by ion chromatography analysis of total sulfates).

We found 0 Mg/Kg (= 0 ppm) which is a milestone.

We also have carried out following physical tests:

- Measurement of tensile strength and percentage elongation - IUP6
- Measurement of tear load – IUP8
- Measurement of distension and strength of grain by the ball burst test – IUP9
- Determination of flex resistance - IUP20
- Tropical test (internal) at 50°C and 90% RH for 15 days. No light source and no gasses (NO_x and SO₂)

By studying the various EU projects we ran into the name of Dr. René Larsen who is retired. He was briefed about our endeavors. He immediately offered his immense expertise to assist and guide us especially in relation with setting up the test requirements for FILK Freiberg.

A total of about 120 leathers have been produced, so If you wish to receive a sample pls. let me know and its size as well.

We use (Central) European Calf skins with a salted weight from 5 – 8 kgs.

The final leather is about 13 – 15 sqft and has a thickness of 0,8 – 0,9 mm. It is undyed as the binders dye it themselves. Because of the specific needs and characteristics it is quite expensive to produce but till now binders are happily accepting this cost as this leather meets their binding requirements. You will also notice a particular pleasant smell of the leather.

We will ask FILK to carry out various tests to have a credible certification to show to the (binding) community. We are also preparing a paper about this process and method which we will publish once we have all tests done by FILK. This paper we will publish.

Cordially,

Steven Siegel

www.siegelleather.com

sales@siegelleather.com

001.336.293.7624