

Chemical analysis of leather

Milling of leather for the sample preparation

Leather is almost always prepared in production facilities

In testing institutes it is mostly comminuted with cutting mills for analytical monitoring. We recommend for this the FRITSCH **Universal Cutting Mill PULVERISETTE 19 – variable speed 300 – 3000 rpm**. This mill distinguishes itself through especially easy maintenance – it is easily cleaned.

If a small amount of carry over between the samples is tolerable, then the **Cutting Mill PULVERISETTE 15** may also be used.



Fig. 1: Universal Cutting Mill PULVERISETTE 19



Cutting Mill PULVERISETTE 15

Comminution with the PULVERISETTE 14 classic line

In the concrete task, however, only 5 g of leather should be crushed. The production of small pieces of leather by punching is no problem and also guarantees a good cross-section over the material to be sampled. For the test, the leather pieces with an edge length of approx. 1 cm were first produced using scissors. These boundary conditions allow the use of **Variable-Speed Rotor Mill PULVERISETTE 14 classic line**. The rotational speed of the rotor was adjusted to 16.000 r/min and a 4 mm sieve with a round perforation used.



Fig. 1: Pre-punched leather chunks

Comminution of thick leather

The dark and extremely thick leather must be pre-comminuted below 1 cm edge length and then slowly dosed. This keeps the thermal burden in acceptable boundaries. The result surprised everyone involved: a very voluminous material evolves. The in this manner won leather sample was used for the determination of the ph-value.



Fig. 2: Comminuted leather

Comminution of thin leather sample

Not quite so difficult was the comminution of thinner, brown leather, similar to leather jackets which consumers are familiar with. Here the pre-comminution did not have to be as elaborate. In order to keep the thermal strain for this material in bounds, it is also recommended, to use the method of the pre-punched specimens.



Fig. 3: Comminuted soft, brown leather

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