Sustainable leather management with enzymes:

**Innovative biotechnology for soaking and liming**

**X-Zyme – products and processes that go hand in hand**

**Cologne** – The innovative X-Zyme process launched by the LANXESS specialty chemicals company is a groundbreaking technology for the beamhouse stage of the leather production process. “The use of two microbial enzymes in the soaking and liming noticeably improves the quality of the pelt, reduces the amount of waste and makes the entire process much more efficient,” explains Dr. Marc Hombeck, head of New Business in LANXESS’ Leather business unit. The new, enzyme-based technology was developed in collaboration with Danish biotechnology specialists Novozymes A/S, Bagsværd, who also manufacture the two pure enzymes by means of bacterial fermentation.

**Complete rehydration within a very short time**

Peltec X-Zyme S, which is used in the soak, is a glucosidase – i.e. a carbohydrate-splitting enzyme – with customized properties which include rapid opening-up and accelerated rehydration of the hide. This means that excellent soaking results can be obtained after just four to six hours. And as the enzyme has no proteolytic activity, the soaking process can be extended – e.g. overnight – without damaging the collagen.

**Gentle but complete unhairing**

In the liming process, Peltec X-Zyme U, a specific protease with high selectivity for pre-keratin, is applied to remove the hair and the epidermis. This product primarily targets the basal membrane of the epidermis, thereby loosening the hair roots and preparing the subsequent unhairing. There is no need for reductive chemicals that are required in conventional hair-saving processes and yet Peltec X-Zyme U tackles the residual hair root problem. Further
News Release

advantages of the new process are a lower effluent load and reduced need for chemicals.

A mature process
Production-scale trials of both, the products and the process, at customers’ plants have proven their efficiency and reliability. The X-Zyme process is robust and can be controlled very accurately and reproducibly by means of parameters such as the temperature and the pH of the float. “The new process ideally meets all the main requirements with regard to productivity, product quality and environmental protection,” says Hombeck, summing up.

Sustainable leather management with X-Zyme
The X-Zyme process is fully in line with LANXESS’ Sustainable Leather Management initiative. It offers a potentially higher area yield and improved quality of the pelts. Furthermore, compared with conventional processes, it reduces the need for wetting agents (surfactants) and liming chemicals such as lime, sulfur compounds and amines. This is resulting in more favorable wastewater values like sludge, COD, sulfide and nitrogen. In addition the rapid opening-up of the hide in the soak and the reduced amount of alkali ensure high-quality pelts.

The X-Zyme process was developed specially for the Peltec product line, which in turn is geared specifically to the requirements of the beamhouse. The range includes leather chemicals for all four process stages – soaking, liming, deliming and bating. You will find more detailed information about products and services for the leather industry on our website www.lanxessleather.com.

The Leather business unit belongs to LANXESS’ Performance Chemicals segment, which achieved total sales of EUR 2.2 billion in fiscal 2012.
LANXESS is a leading specialty chemicals company with sales of EUR 9.1 billion in 2012 and roughly 17,500 employees in 31 countries. The company is currently represented at 52 production sites worldwide. The core business of LANXESS is the development, manufacturing and marketing of plastics, rubber, intermediates and specialty chemicals. LANXESS is a member of the leading sustainability indices Dow Jones Sustainability Index (DJSI) World and FTSE4Good as well as the Carbon Disclosure Leadership Index (CDLI).

Cologne, August 12, 2013
sdt-kaw (2013-00096e)

Forward-Looking Statements.
This news release may contain forward-looking statements based on current assumptions and forecasts made by LANXESS AG management. Various known and unknown risks, uncertainties and other factors could lead to material differences between the actual future results, financial situation, development or performance of the company and the estimates given here. The company assumes no liability whatsoever to update these forward-looking statements or to conform them to future events or developments.

Information for editors:

You can find further information concerning LANXESS chemistry in our WebMagazine at http://webmagazine.lanxess.com.

Follow us on Facebook, Instagram, Twitter and YouTube:
http://www.facebook.com/LANXESS
http://www.instagram.com/lanxess
http://www.twitter.com/LANXESS
http://www.youtube.com/LANXESSTV