



LIFE14 ENV/IT/000443 - LIFETAN PROJECT

Co-financed by EC  
in the framework of LIFE programme



# Lifetan

## Eco friendly tanning cycle

The tanning industry of the European Union, located for 70% in Italy and Spain, represents a significant share of the world leather production, and it is an important economic area for the whole of Europe. However, the traditional leather production processes still have a significant environmental impact.

The main environmental, social and economic goal of the LIFETAN project was the replacement of current commercial products (chemical and toxic) with innovative products (natural/naturalized) in the whole tanning cycle, in order to establish a significantly eco-sustainable and convenient business for companies, whilst maintaining high quality and perfectly workable leather products.





## OBJECTIVES

LIFETAN aims at demonstrating the use of innovative and eco-friendly natural products and technologies for the whole tanning cycle, mainly concerning the bating, defatting, tanning, fatting, and dyeing phases. The project is based on the integration of the successful results of five previous LIFE projects: PODEBA, ECODEFATTING, OXATAN, ECOFATTING, and BIONAD).



## LEATHERS CHARACTERIZATION

The effectiveness of using natural products was demonstrated at three different levels:

- laboratory
- semi-industrial
- pre-industrial

The analyses focused on:

- the interaction among the innovative products in the whole tanning cycle
- the comparison between traditional and innovative products and their properties



## RESULTS

The experimental results showed that the introduction of natural/naturalized products did not significantly affect the leather morphology, thermal behaviour and physical properties.

The project is addressed to the production both of leathers and leather goods.



	Bating=traditional Defatting=traditional Tanning=Cr	Bating=natural Defatting= natural Tanning=Cr	Bating=traditional Defatting=traditional Tanning=Oxa	Bating=natural Defatting= natural Tanning= Oxa
<b>Tear strength (N)</b> (ref. value >150 N)	181	149	226	272
<b>Tensile strength (N/mm<sup>2</sup>)</b> (ref. value >15 N/mm <sup>2</sup> )	30,4	20,4	18,1	21,1
<b>Elongation at break (%)</b> (ref. value >40%)	56,3	69,7	60,1	73,2
<b>Shrinkage temperature (°C)</b>	>100	>100	71	70