



Poultry manure  
New frontier in leather tanning  
The LIFE project



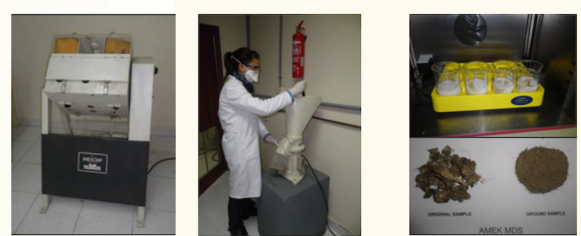
ENZYME ACTIVITY OF POULTRY MANURE

Manure contains Carbon, mineral salts, nutrients (nitrogen, phosphorus, ...) but tannery is interested in the content of proteolytic enzymes.  
 The enzymatic activity was determined with a standard method and with a method specifically developed in the project.

BATING WITH POULTRY MANURE

BEAM-HOUSE	SOAKING
	LIMING
	FLESHING
	DELIMING
	<b>BATING</b>
	DEGREASING
TANNING	PICKEL
	CHROME
	VEGETABLE
	OTHER
RETANNING	SAMMING
	SPLITING
	SHAWING
	RETANNING
	FATLIQUORING
	DYEING
DRYING	SETTING-OUT
	VACUUM
	HOT CYLINDER
	FRAME
	HANG-UP
	CONDITIONING
	EMBOSSING
	FINISHING

Bating can soften the dermis by weakening its elastin (which makes the skin rigid) and can complete its cleansing, removing the last keratin residues



CURRENT RESULTS

**OBTAINED LEATHERS**

Excellent results obtained with the use of P120 Deodorized Poultry Manure DPM in the production of various leather articles compared with the reference ones already on the market

**THE ENVIRONMENTAL IMPACT**

Odor impact

- P120 manure with less impact (dry conditions)
- In bating (wet process) no odor additions are evident with P120

Process waters

Reduction of the polluting load in bating wastewater: BOD, COD, conductivity, TKN, ammonia, sulphides

Trial code	<u>Tear strength</u>	<u>Tensile strength</u>	<u>Elongation at break</u>
Standard	» 35N	>15 N/mm²	> 40%
P120	» 35N	>15 N/mm²	> 40%

QUALITY ASSESSMENT OF LEATHER

Trial code	Leather's structure	<u>Cleaning surface</u>	Smell during process	<u>Smell on finished leather</u>
Standard	<u>relaxed</u>	<u>clean</u>	light	no
P120	<u>very similar</u>	<u>very similar</u>	<u>very similar</u>	no

