



**IUE 6 - Pollution Values from Tannery Processes under Conditions of Good Practice**

Updated 2018

Values per tonne of rawhide	Water (m <sup>3</sup> /t)	COD (kg/t)	BOD <sub>5</sub> (kg/t)	S.S. (kg/t)	Cr <sup>3+</sup> (kg/t)	S <sup>2-</sup> (kg/t)	TKN (kg/t)	Cl <sup>-</sup> (kg/t)	SO <sub>4</sub> <sup>2-</sup> (kg/t)	Grease (kg/t)	TDS (kg/t)
<b>BOVINE SALTED RAW HIDE PROCESS</b>											
Beamhouse (soaking to bating)	7-25	120-160	40-60	70-120		2-9	9-14	120-150	5-20	5-8	200-300
Tanning operations	1-3	10-20	3-7	5-10	2-5		0-1	20-60	30-50	1-2	60-120
Post tanning	4-8	15-40	5-15	10-20	1-2		1-2	5-10	10-40	3-8	40-100
Finishing	0-1	0-10	0-4	0-5							
TOTAL	12-37	145-230	48-86	85-155	3-7	2-9	10-17	145-220	45-110	9-18	300-520
<b>PIG SKINS</b>											
Beamhouse	23-49	120-272	46-98	62-110		3-7	11-17	57-197	4-15	30-67	120-300
Tanning operations	2-5	10-18	3-6	4-8	2-4		0-1	20-37	26-45	1	40-120
Dyeing operations	5-10	10-25	3-9	8-15	1-2		1-2	3-6	10-40	3	20-80
Finishing	2-5	0-5	0-2	0-2							
TOTAL	32-69	140-320	52-115	70-135	3-6	3-7	12-20	80-240	40-100	34-71	180-500
Values in litres or grams per skin	Water (l/skin)	COD (g/skin)	BOD <sub>5</sub> (g/skin)	S.S. (g/skin)	Cr <sup>3+</sup> (g/skin)	S <sup>2-</sup> (g/skin)	TKN (g/skin)	Cl <sup>-</sup> (g/skin)	SO <sub>4</sub> <sup>2-</sup> (g/skin)	Grease (g/skin)	TDS (g/skin)
<b>SHEEPSKINS (wet-salted)</b>											
Beamhouse	65-150	250-600	100-260	150-300		6-20	15-30	150-400	5-40		
Degreasing - Tanning	30-100	50-300	20-100	15-30	8-12		4-10	40-200	30-50	40-150	
Post tanning	15-35	30-100	15-35	10-20	1-3		2-4	20-40	10-20		
Finishing	0-10	0-5	0-2	0-2							
TOTAL	110-265	330-1005	135-397	175-352	9-15	6-20	21-44	210-640	45-110	40-150	
<b>WOOL-ON SHEEPSKINS</b>											
Beamhouse	160 - 240	550 - 1100	150 - 1000	100	-	-	16	400			600
Tanning operations	40 - 70	150 - 300	45 - 250	15	15	-	2	460		40-150	650
Dyeing operations	75 - 100	80	25 - 50	80	5	-	3	50			270
Finishing	-	-	-	-	-	-	-	-			
TOTAL	275 - 410	780 - 1500	220 - 1300	195	20	-	21	910		40-150	1520
<b>bovine hides = goat skins</b>											

*It is important to note that all values relate to processing under conditions of good practice, and the ranges reflect variations in raw materials and processes.*

*Taking into account the increasing importance of water conservation, it must be pointed out that this practice leads to higher pollution level in terms of concentration.*

*For this reason, the IUE commission requests that the regulating authorities limit discharges in terms of mass rather than concentration.*