



Supplementary Data

Biological solubilisation of leather industry wastes in anaerobic conditions: Effect of Chromium (III) presence, pre-treatments and temperature strategies

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Table S1. Basic characterization of tannery solid wastes and inoculum.

	TS (%)	VS (%) *	% Organic content **	Cr (III) (mg/g)
Inoculum	3.0 ± 0.3	1.9 ± 0.4	61.3 ± 0.9	-
Chrome-tanned leather shavings	45.2 ± 1.0	42.5 ± 1.5	94.0 ± 1.9	18 ± 0.6
Chromium-free leather shavings	51.2 ± 0.8	50.6 ± 1.4	98.8 ± 1.1	-
Particle Size Distribution (PSD)				
Particle size (mm)	>4	2.5-4	1.25-2.5	<1.25
% (mass)	40.9	27.8	6.2	25.0

* Over the total weight (wet weight). ** Over the dry weight (TS)

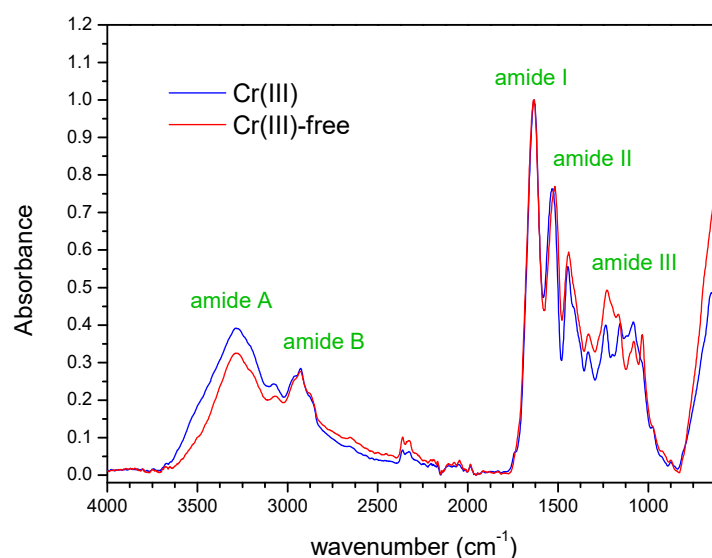


Figure S1. Normalized ATR-FTIR spectra of the as-received leather shavings.

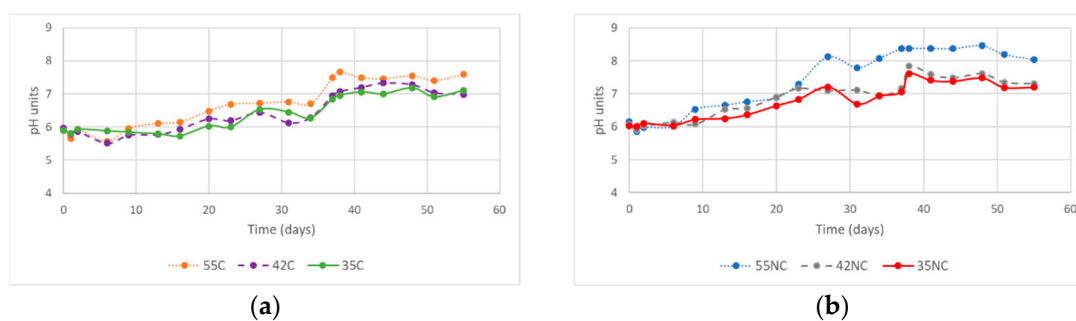


Figure S2. Evolution of pH at thermophilic (55°C), intermediate (42°C) and mesophilic (35°C) regimes: a) chrome-tanned (C); b) chromium-free (NC) leather shavings.

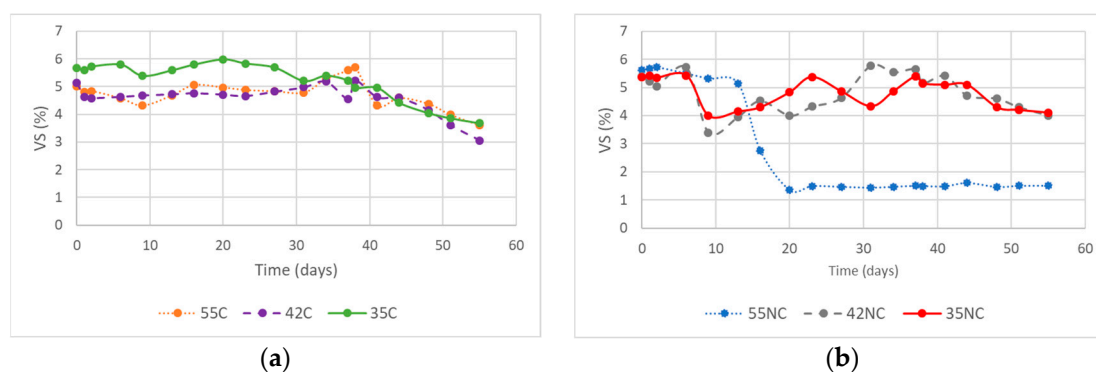


Figure S3. Evolution of volatile solids (VS, expressed as %) at thermophilic (55°C), intermediate (42°C) and mesophilic (35°C) temperature: a) chrome-tanned (C); b) chromium-free (NC) leather shavings.

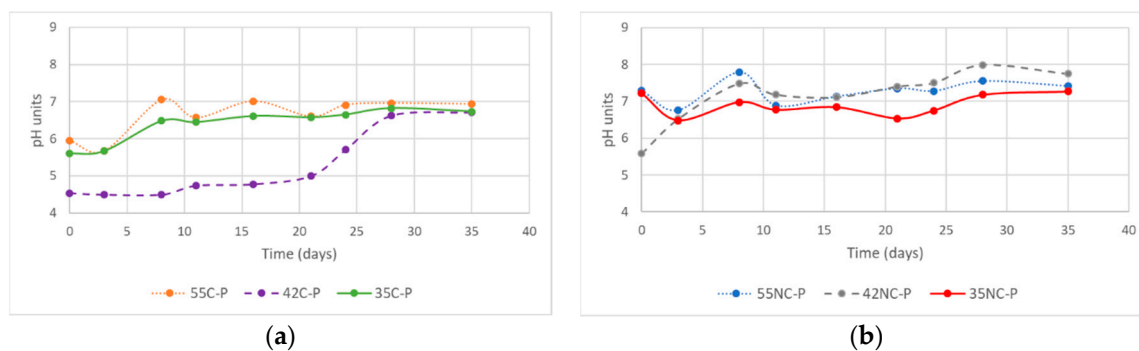


Figure S4. Evolution of pH at thermophilic (55°C), intermediate (42°C) and mesophilic (35°C) temperature regimes: a) chrome-tanned (C) and b) chromium-free (NC) pretreated leather shavings.

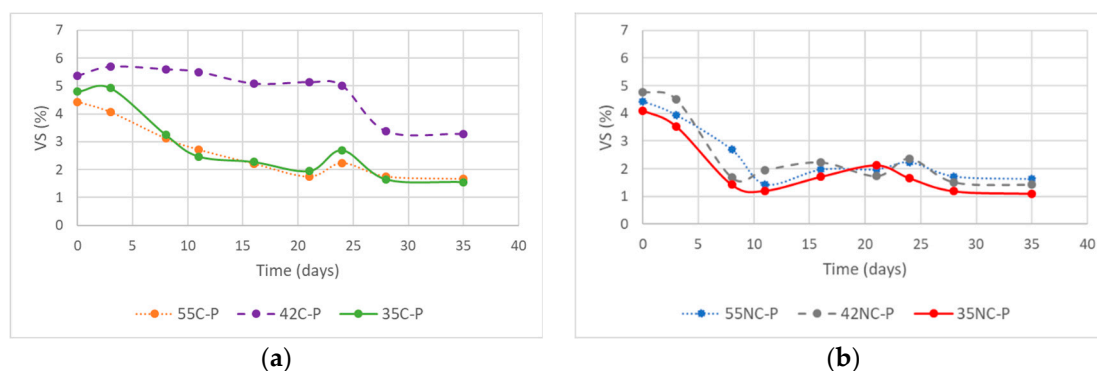


Figure S5. Evolution of volatile solids (VS, expressed as %) at thermophilic (55°C), intermediate (42°C) and mesophilic (35°C) temperature regime: a) chrome-tanned (C) and b) chromium-free (NC) pretreated leather shavings.