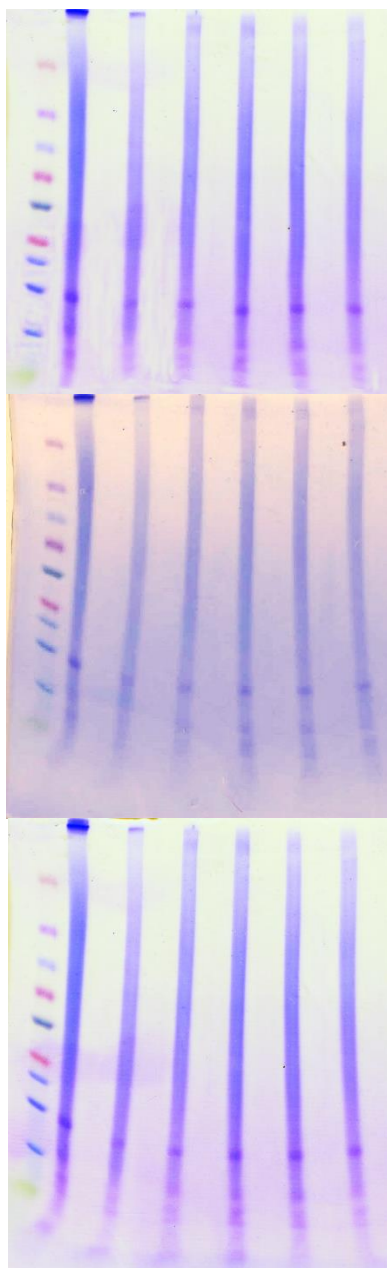


***Effect of different cocoon stifling methods on the properties of silk fibroin biomaterials.***

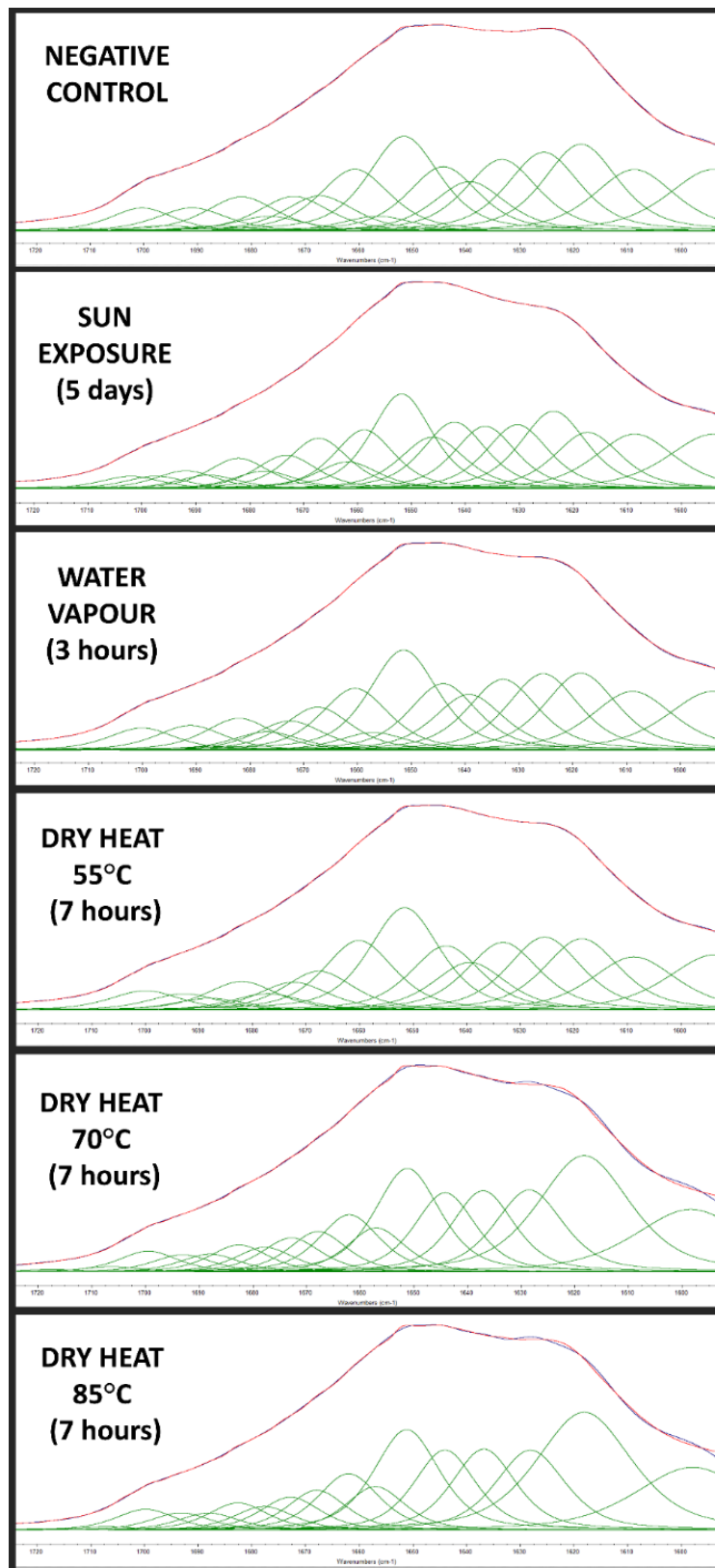
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**Figure S1.** Images of full-length gels (SDS-PAGE) obtained for fibroin dissolutions from cocoons stifled by means of different protocols. The lanes observed from left to right correspond to: molecular weight marker, negative control, stifling by means of sun exposure, water vapour exposure and dry heat at 55°C, 70°C and 85°C, respectively.



**Figure S2.** Illustrative images of Fourier self-deconvolution (amide I band of fibroin) performed to the annealed films produced with SF dissolutions obtained from cocoons stifled by means of different treatments.

**Table S1.** Mechanical properties of the annealed films made with SF dissolutions obtained from cocoons stifled with different methodologies. Data are expressed as average values  $\pm$  standard deviation (n=3).

\*statistically different values with the negative control (Bonferroni,  $p < 0.01$ )

	<b>Tensile strength (MPa)</b>	<b>Strain at break (%)</b>	<b>Elastic modulus (GPa)</b>
<b>NEGATIVE CONTROL</b>	46.39 $\pm$ 4.40	2.70 $\pm$ 0.33	2.32 $\pm$ 0.33
<b>SUN EXPOSURE (5 d)</b>	27.70 $\pm$ 6.77*	1.54 $\pm$ 0.24*	2.31 $\pm$ 0.44
<b>WATER VAPOUR (3 h)</b>	47.97 $\pm$ 2.55	2.27 $\pm$ 0.21	2.35 $\pm$ 0.17
<b>DRY HEAT 55 °C (7 h)</b>	40.50 $\pm$ 4.96	2.33 $\pm$ 0.15	2.35 $\pm$ 0.23
<b>DRY HEAT 70 °C (7 h)</b>	35.30 $\pm$ 3.87	1.90 $\pm$ 0.36	2.34 $\pm$ 0.12
<b>DRY HEAT 85 °C (7 h)</b>	22.96 $\pm$ 6.28*	1.33 $\pm$ 0.25*	2.36 $\pm$ 0.33