

# Supplementary Materials: Surface-Modified Carboxylated Cellulose Nanofiber Hydrogels for Prolonged Release of Polyhexamethylene Biguanide Hydrochloride (PHMB) for Antimicrobial Applications

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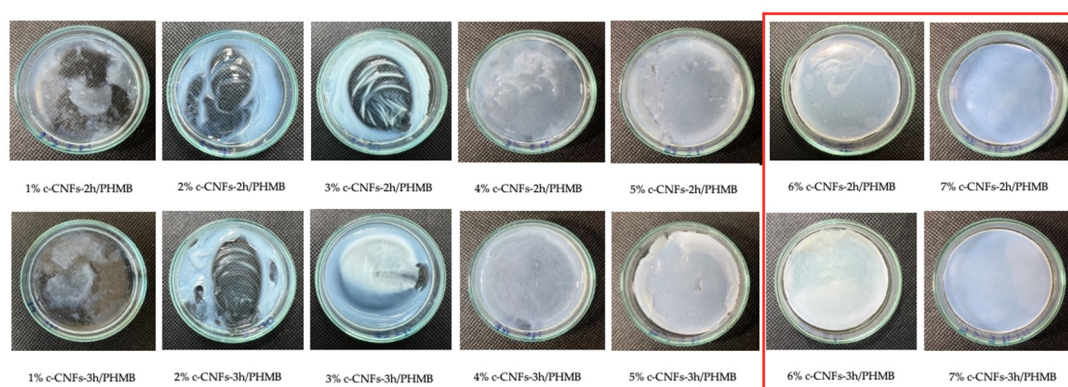
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**Figure S1.** The appearance of c-CNFs hydrogels loading PHMB by the variation of reaction time (2 and 3 h.) and ratio of c-CNFs (1–7% w/v).

**Table S1.** Puncture strength, gel content (GC), maximum swelling degree (MSD) and drug content of c-CNFs hydrogels containing PHMB.

Formulations	Puncture strength (N/mm <sup>2</sup> )	GC (%)	MSD (%)	Drug content (%)
6% c-CNFs-2h/PHMB	0.16 ± 0.02 <sup>a</sup>	55.53 ± 1.97 <sup>a</sup>	77.52 ± 21.37 <sup>a</sup>	68.42 ± 3.93 <sup>a</sup>
6% c-CNFs-3h/PHMB	0.17 ± 0.03 <sup>a</sup>	54.67 ± 5.57 <sup>a</sup>	74.61 ± 14.04 <sup>a</sup>	66.47 ± 5.71 <sup>a</sup>
7% c-CNFs-2h/PHMB	0.31 ± 0.03 <sup>b</sup>	30.60 ± 2.71 <sup>b</sup>	231.19 ± 22.09 <sup>b</sup>	88.69 ± 4.99 <sup>b</sup>
7% c-CNFs-3h/PHMB	0.30 ± 0.02 <sup>b</sup>	29.07 ± 3.91 <sup>b</sup>	225.44 ± 10.32 <sup>b</sup>	86.64 ± 1.90 <sup>b</sup>

For each test, average values with the same letter are not significantly different. Thus, average values with the different letter, e.g., 'a' or 'b' are statistically different ( $p < 0.05$ ).