

## Supplementary file

### 1. FTIR spectroscopy analysis

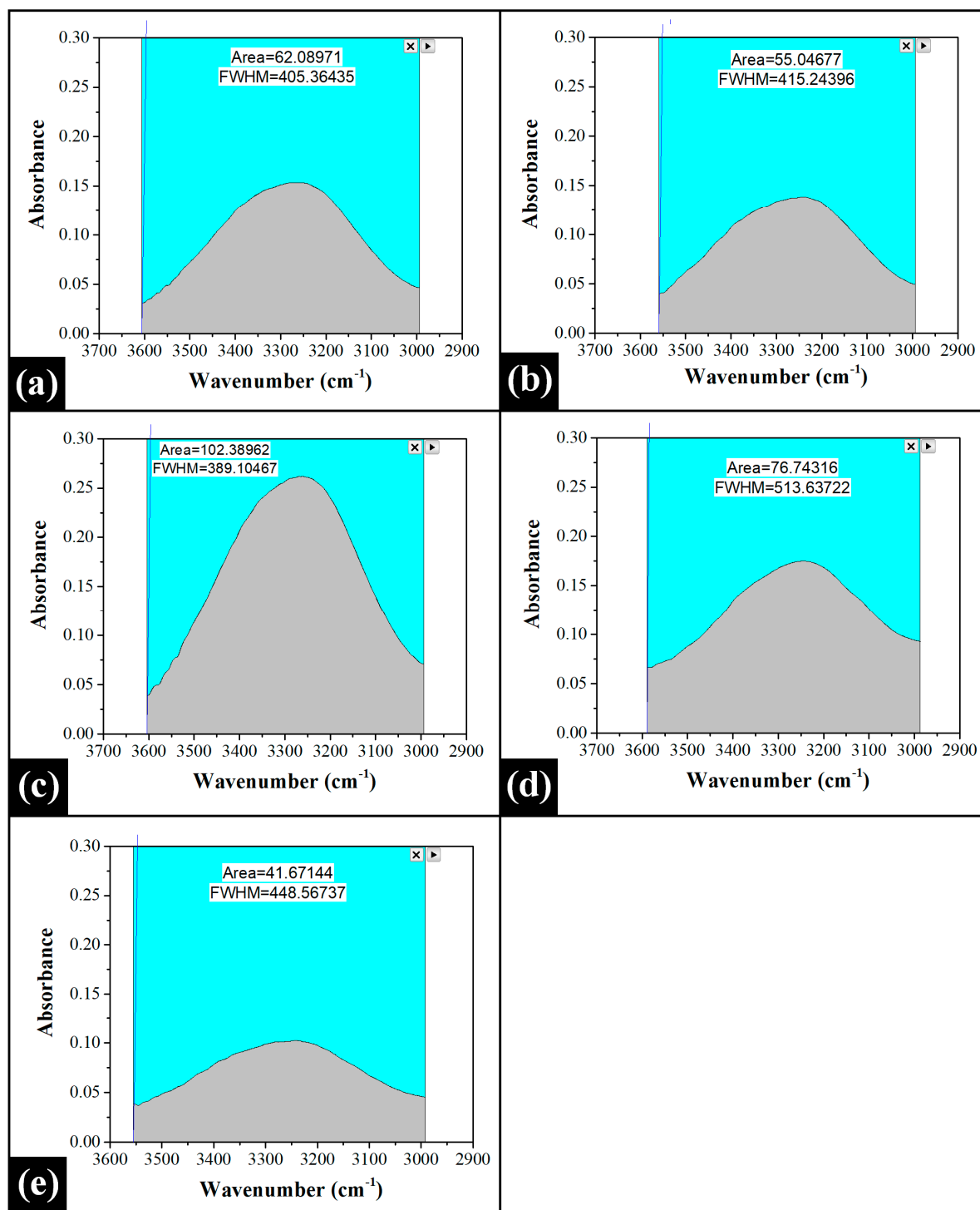
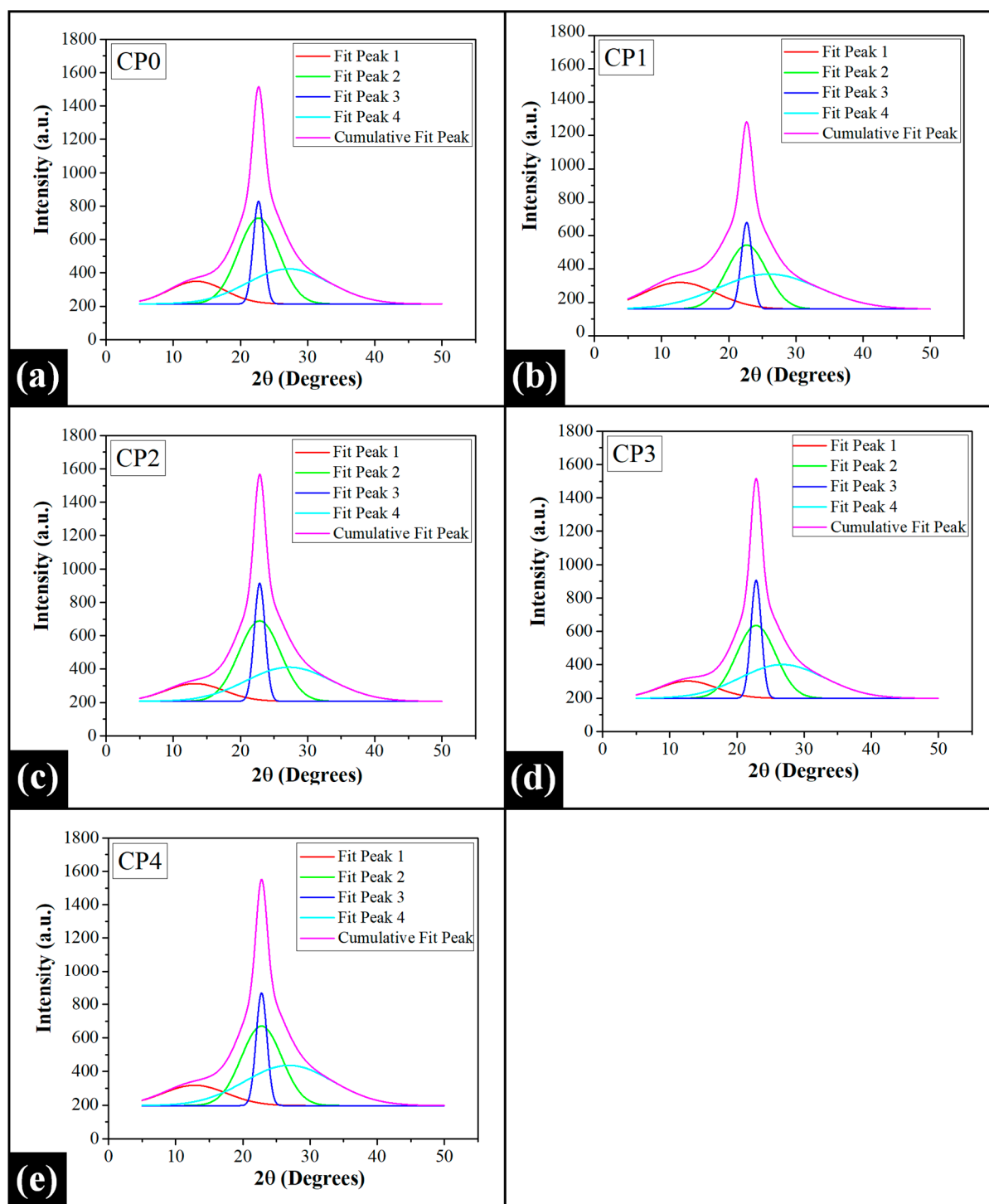


Figure S1. Area under the O-H stretching peak of the prepared films: (a) CP0, (b) CP1, (c) CP2, (d) CP3, and (e) CP4.

## 2. XRD analysis



**Figure S2. Deconvoluted diffractograms of the prepared films: (a) CP0, (b) CP1, (c) CP2, (d) CP3, and (e) CP4.**

**Table S1. Parameters calculated from the deconvoluted peaks.**

<b>Samples</b>	<b>% <math>\Delta</math>crystallinity</b>	<b>Peak height ratio</b>	<b>Degree of crystallinity (<math>X_c</math>)</b>
<b>CP0</b>	--	1.196	53.232
<b>CP1</b>	-14.511	1.352	55.525
<b>CP2</b>	4.381	1.467	57.021
<b>CP3</b>	2.603	1.619	58.773
<b>CP4</b>	3.911	1.417	56.416

### 3. Stress relaxation analysis

**Table S2. Stress relaxation parameters.**

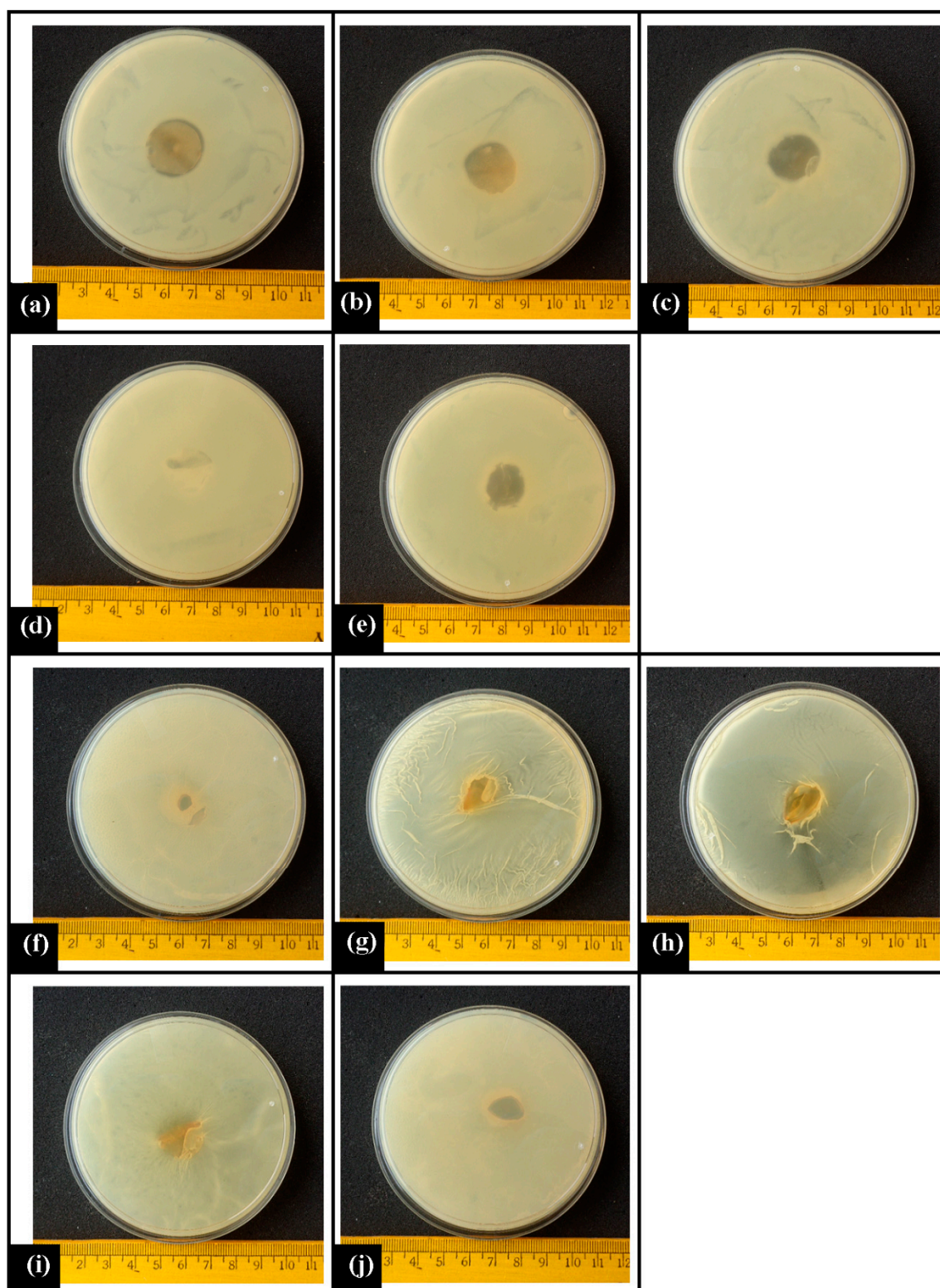
Analysis Model	Parameters	Film samples				
		CP0	CP1	CP2	CP3	CP4
--	$\sigma_{\max}$ (Kg/mm <sup>2</sup> )	1.753 ± 0.307	1.932 ± 0.432	2.083 ± 0.088	1.972 ± 0.374	1.702 ± 0.217
	$\sigma_{\min}$ (Kg/mm <sup>2</sup> )	0.709 ± 0.181	0.794 ± 0.144	0.903 ± 0.045	0.906 ± 0.190	0.777 ± 0.097
	%SR	59.852 ± 3.837	58.613 ± 2.037	56.609 ± 0.712	54.179 ± 1.107	54.298 ± 0.442
Wiechert model	P <sub>0</sub>	0.401 ± 0.037	0.413 ± 0.020	0.433 ± 0.007	0.456 ± 0.010	0.455 ± 0.004
	P <sub>1</sub>	0.304 ± 0.014	0.302 ± 0.011	0.292 ± 0.004	0.275 ± 0.005	0.277 ± 0.004
	$\tau_1$ (sec)	1.254 ± 0.132	1.336 ± 0.036	1.377 ± 0.014	1.377 ± 0.082	1.430 ± 0.012
	P <sub>2</sub>	0.220 ± 0.022	0.208 ± 0.008	0.204 ± 0.002	0.199 ± 0.001	0.200 ± 0.001
	$\tau_2$ (sec)	15.888 ± 0.878	16.579 ± 0.260	16.849 ± 0.093	17.622 ± 0.364	17.549 ± 0.174
	R <sup>2</sup>	0.998	0.998	0.998	0.998	0.998

#### 4. DSC analysis

**Table S3. DSC peak parameters**

<b>Samples</b>	<b>T<sub>evap</sub> (°C)</b>	<b>T<sub>m</sub> (°C)</b>	<b>T<sub>c</sub> (°C)</b>
<b>CP0</b>	90	221	169
<b>CP1</b>	87	219	166
<b>CP2</b>	99	217	153
<b>CP3</b>	88	222	176
<b>CP4</b>	109	214	154

## 5. Antimicrobial analysis



**Figure S3. Antimicrobial activity of the pristine films (without drug) against *E. coli*: (a) CP0, (b) CP1, (c) CP2, (d) CP3, (e) CP4; *B. cereus*: (f) CP0, (g) CP1, (h) CP2, (i) CP3, (j) CP4.**