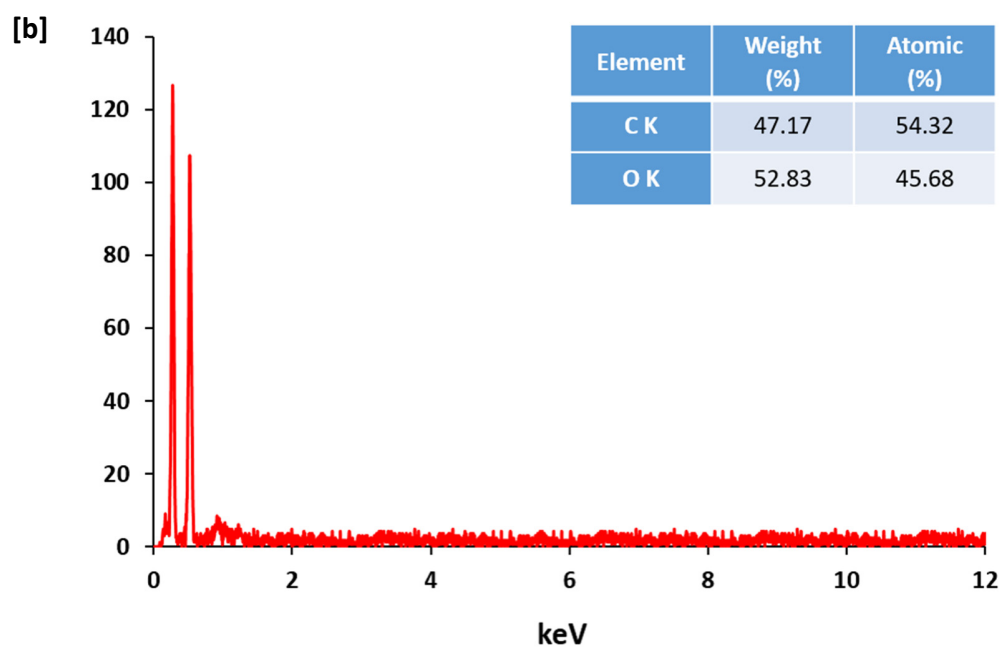
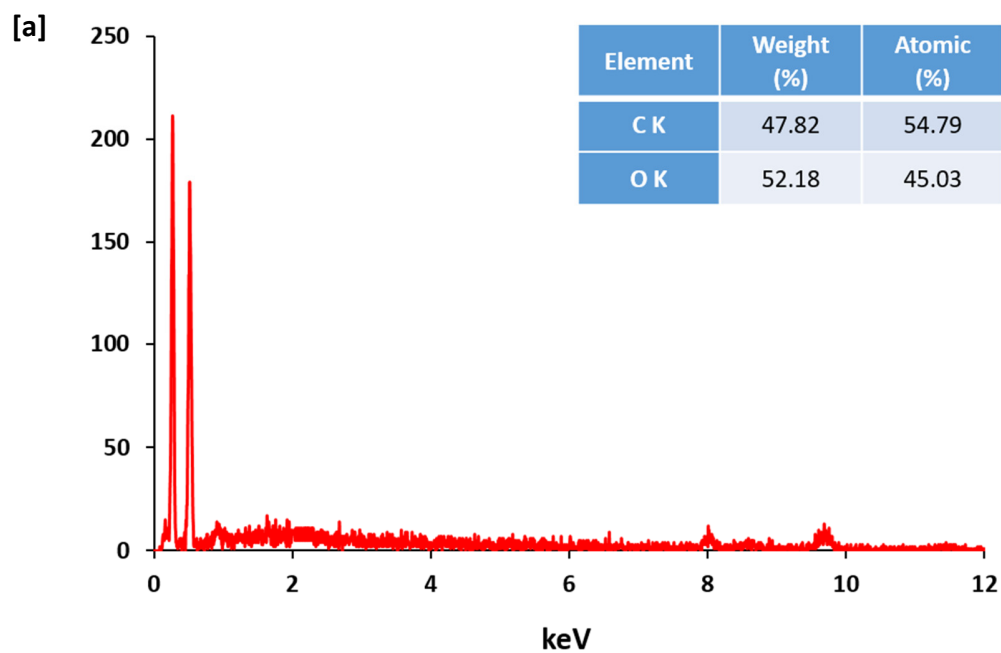
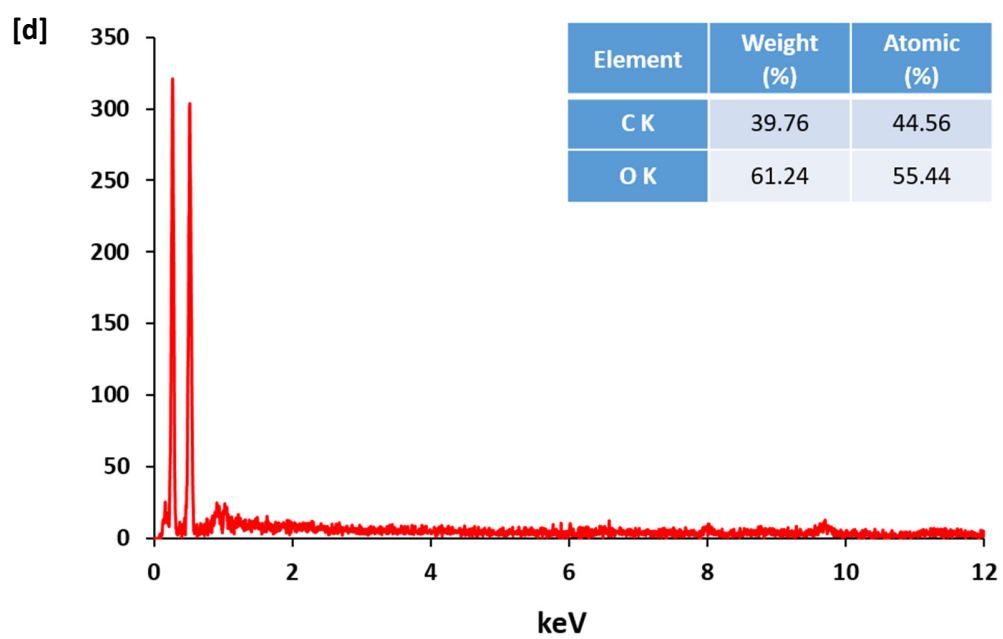
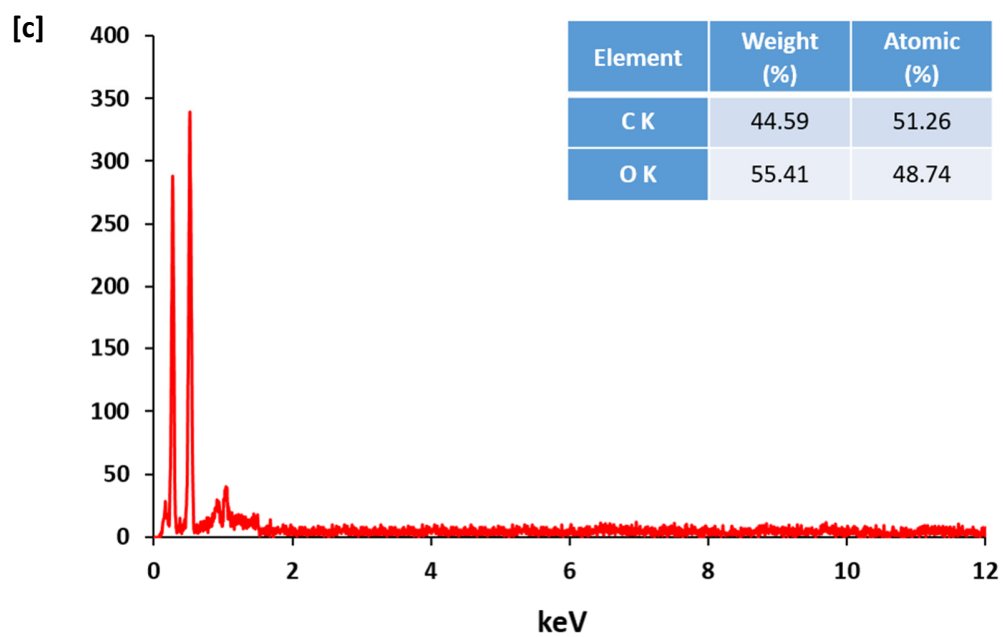
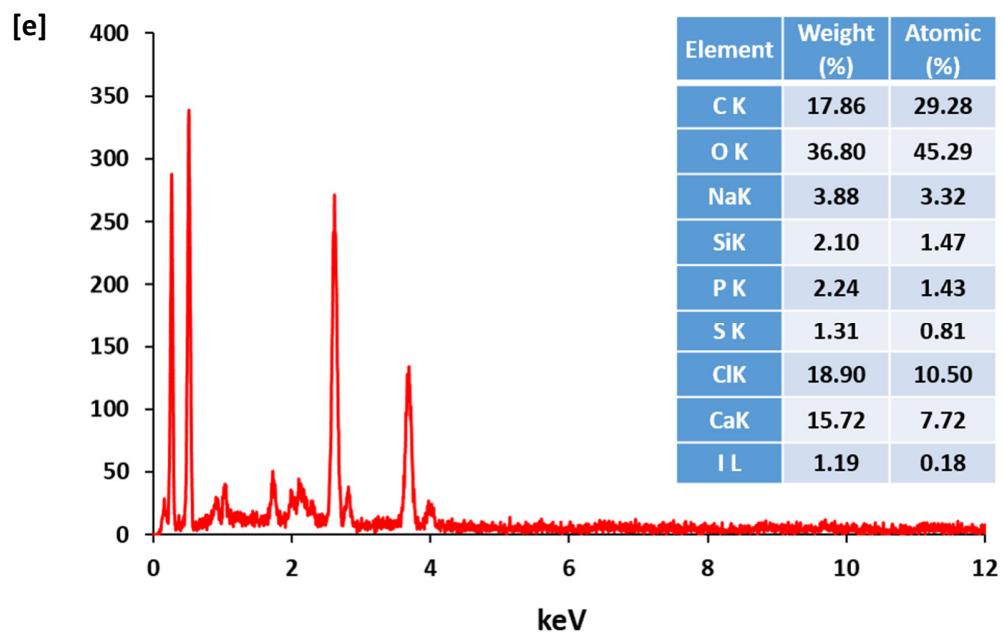


## Supplementary File

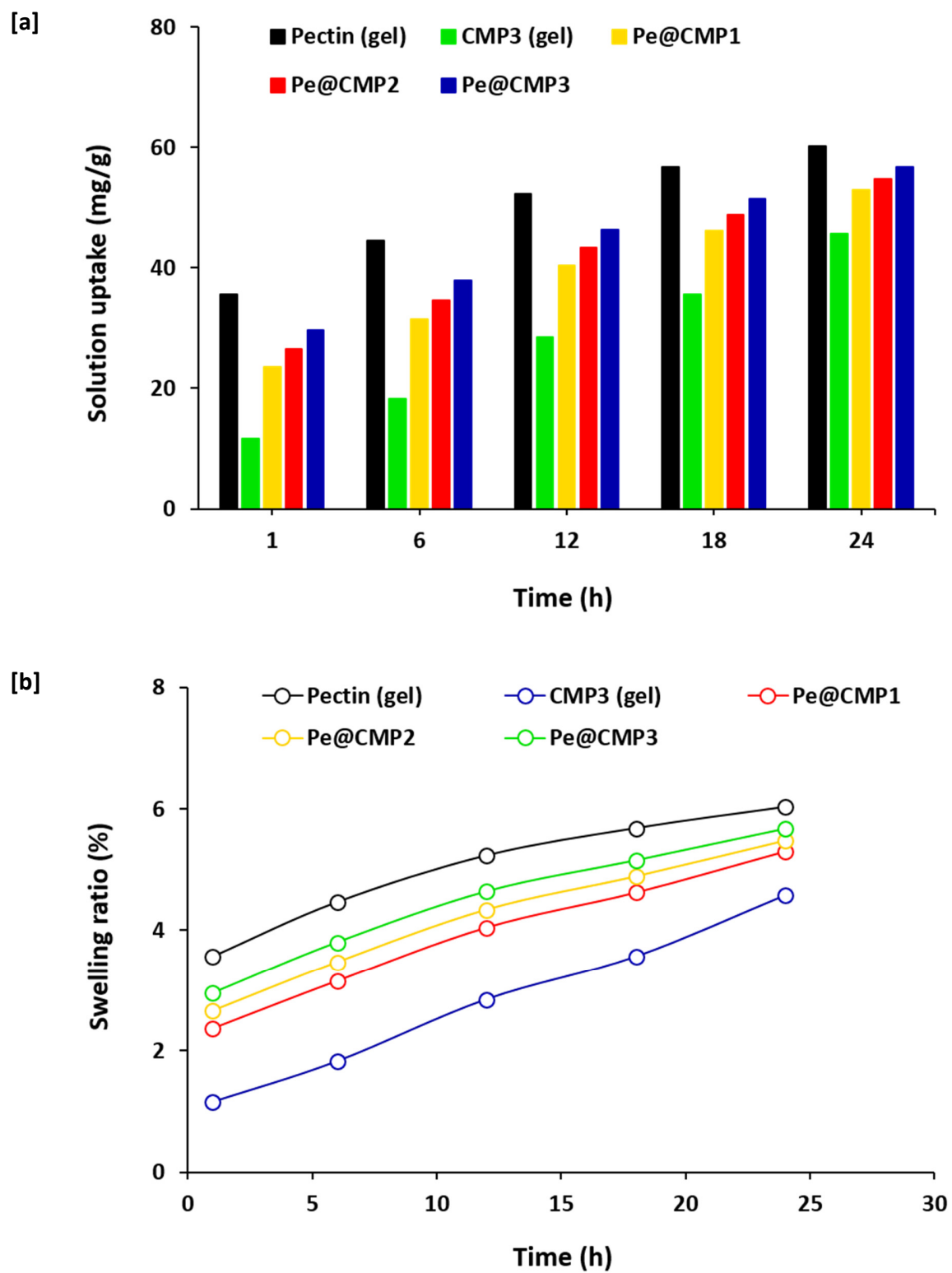
**Figure S1:** EDX for the prepared hydrogel; **[a]** CMP, **[b]** Pe@CMP (1:9), **[c]** Pe@CMP (2:8), **[d]** Pe@CMP (3:7) and **[e]** PI@Pe@CMP (3:7).



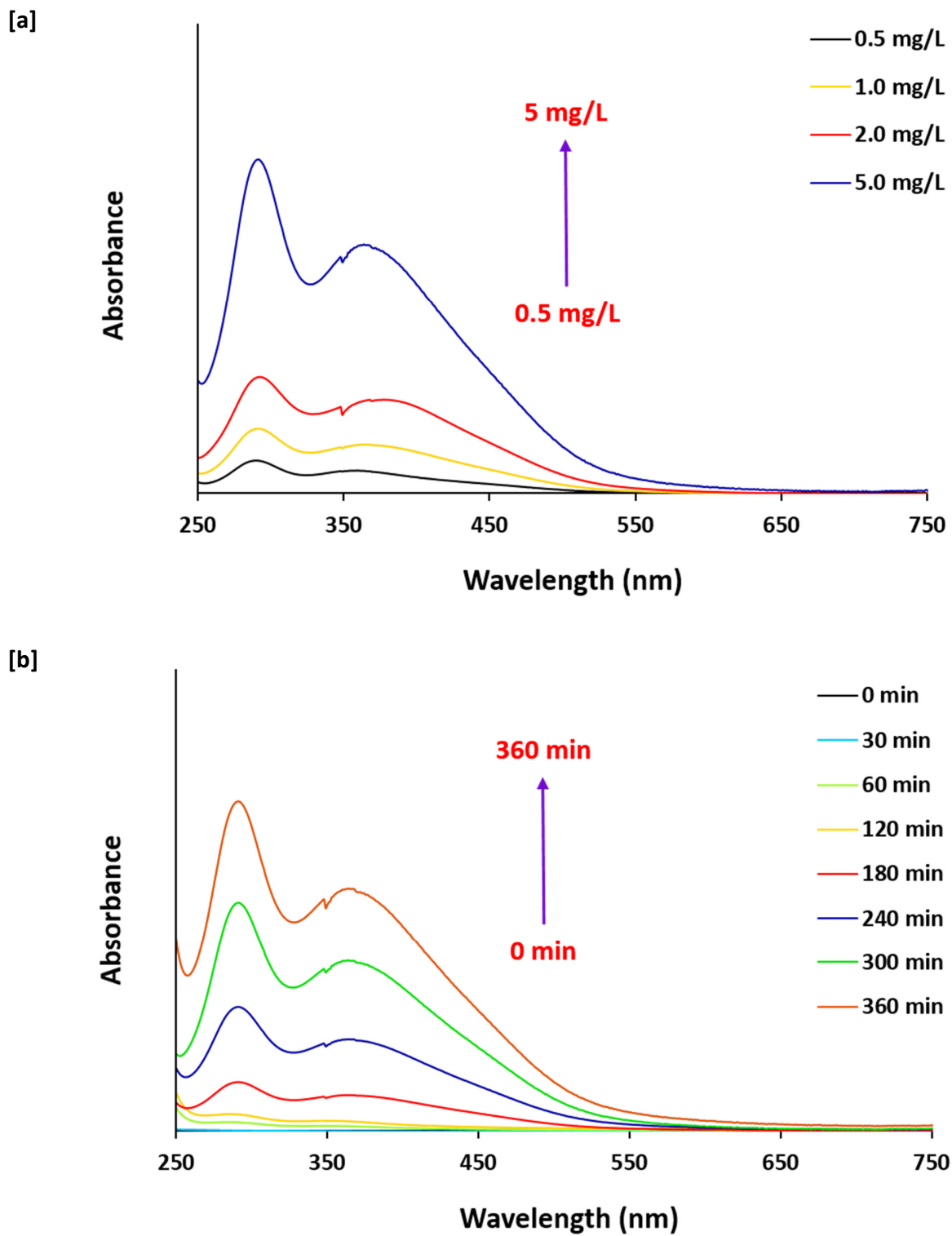




**Figure S2:** [a] Solution uptake in NaCl and [b] swelling ratio in NaCl.



**Figure S3:** UV spectra for the PI; **[a]** pure PI (different concentrations) and **[b]** released PI from Pe@CMP hydrogel at different time.



**Table S1:** Parameters of kinetics for the release of betadine from the Pe@CMP composites.

Samples	First Order		Higuchi		Hixson-Crowell		Korsmeyer-Peppas		
	R <sup>2</sup>	K <sub>1</sub> (h <sup>-1</sup> )	R <sup>2</sup>	K <sub>H</sub> (h <sup>-1/2</sup> )	R <sup>2</sup>	K <sub>HC</sub> × 10 <sup>-3</sup> (h <sup>-1/3</sup> )	R <sup>2</sup>	n	K <sub>KP</sub> × 10 <sup>-3</sup> (h <sup>-n</sup> )
<b>CMP</b>	0.98	2.75	0.94	14.49	0.96	192.0	0.98	0.069	300.0
<b>Pe@CMP1</b>	0.95	1.69	0.90	9.19	0.87	78.0	0.94	0.051	186.0
<b>Pe@CMP2</b>	0.99	0.79	0.92	5.96	0.95	48.0	0.99	0.049	84.0
<b>Pe@CMP3</b>	0.90	1.37	0.88	7.62	0.75	54.0	0.87	0.077	150.0