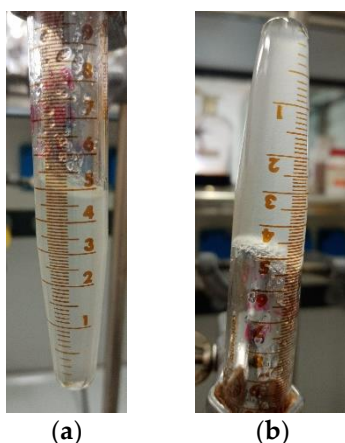


## Supplementary Materials

# A Highly Efficient Polystyrene-Based Cationic Resin to Reduce Bacterial Contaminations in Water

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**Figure S1.** Appearance of the swelled R4 obtained hydrating the dry resin with an excess of 10 mL of water and recovered by centrifugation at 4000 rpm for 30 min: test tube in normal vertical position (a) and in inverted position (b).

**Table S1.** Weights and cumulative weight loss (%) of R4 determined at times T<sub>0</sub>-T<sub>7</sub>.

	Time (h)		R4 (mg)	Weight loss (%) <sup>*</sup>
T <sub>0</sub>	0		267.3	0
T <sub>1</sub>	1		154.8	42.1
T <sub>2</sub>	1.5		92.0	65.6
T <sub>3</sub>	2		50.4	81.1
T <sub>4</sub>	2.5		22.8	91.4
T <sub>5</sub>	3		8.9	96.7
T <sub>6</sub>	3.5		8.4	96.8
T <sub>7</sub>	6.5		9.0	96.6

**Table S2.** Weights of R4 at times T<sub>0</sub>-T<sub>3</sub> and the cumulative swelling ratio percentages.

	Time (min)	R4 (mg)	Swelling ratio (%)	Average equilibrium swellin ratio (%)
T <sub>0</sub>	0	10.1	0	
T <sub>1</sub>	13	373.2	3595.0	
T <sub>2</sub>	30	333.9	3205.9	3399.3±158.9
T <sub>3</sub>	45	353.2	3397.0	

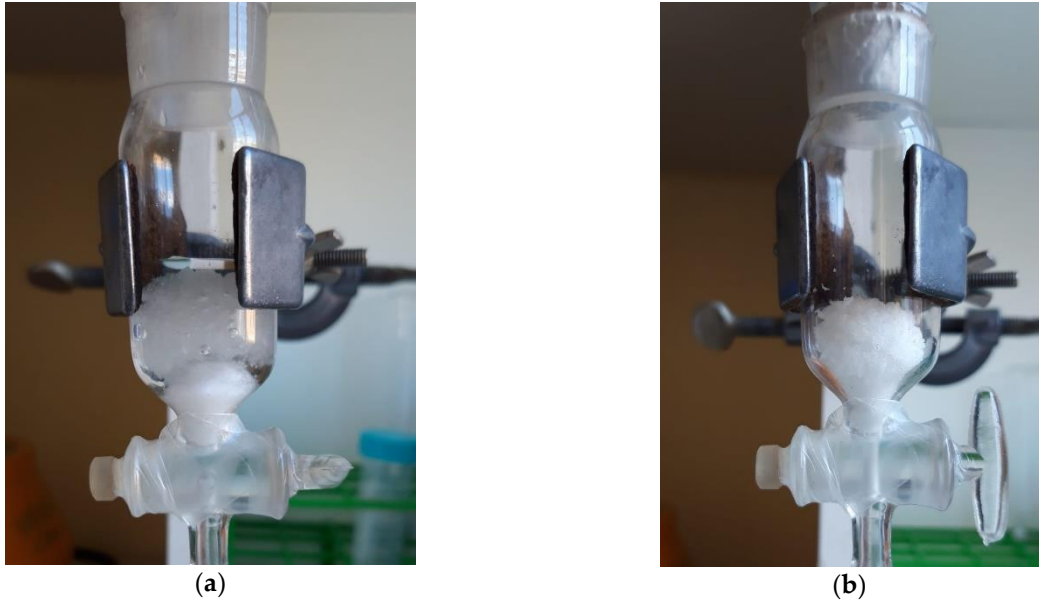


Figure S2. Column filled with R4 when in contact with the aqueous model of contaminated water (a) and after filtration (b).

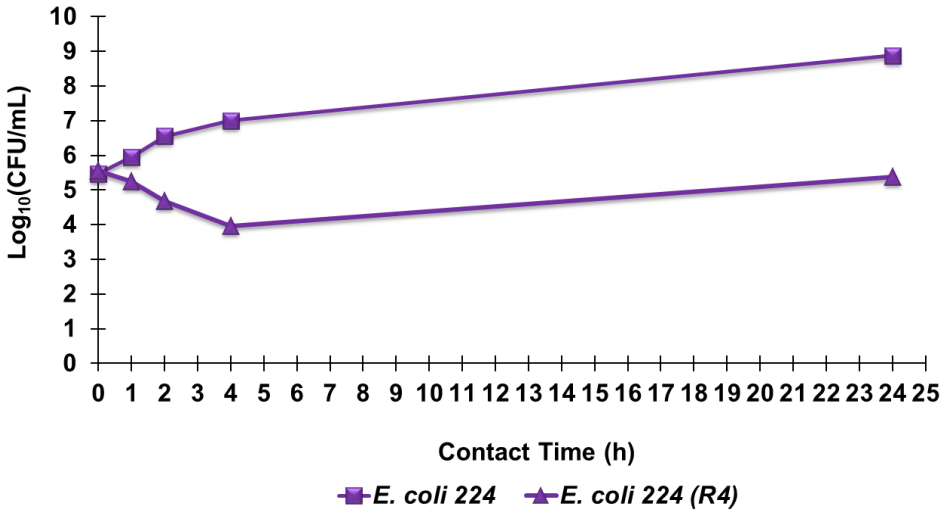


Figure S3. Variation in the Log<sub>10</sub>(CFU/mL) of *E. coli* 224 when exposed to R4 [*E. coli* 224 (R4)] in a column imitating a sanitation system for 1, 2, 4 and 24 hours of exposure, vs. control (*E. coli* 224).

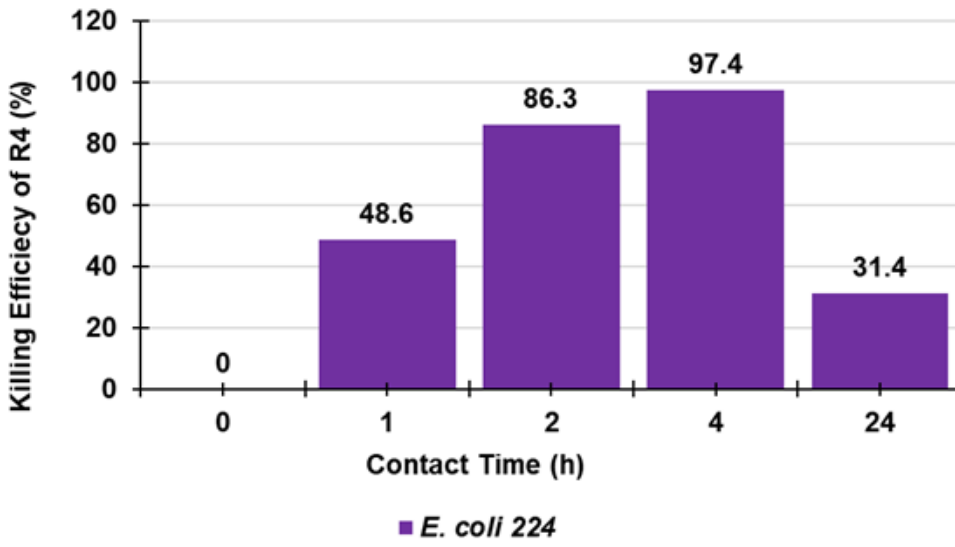


Figure S4. Percentage of the bacterial cells killed by R4 in a column imitating a sanitation system after 1, 2, 4 and 24 hours of exposure, when tested against *E. coli* 224.