

**Table S1.**Antibiotic resistant (AR) strains presence/absence on lettuce leaves and top soil irrigated with urban wastewater treatment plant (UWTP) effluent treated with H<sub>2</sub>O<sub>2</sub>/sunlight process.

Irrigation week	Irrigation water	AR <i>E. coli</i>		AR <i>E. faecalis</i>	
		Lettuce leaves*	Top soil**	Lettuce leaves*	Top soil**
1 <sup>st</sup>	R1	1	—	—	—
		2	—	—	—
		3	—	—	—
	R2	1	—	—	—
		2	—	—	—
		3	—	—	—
	NC	1	—	—	—
		2	—	—	—
		3	—	—	—
2 <sup>nd</sup>	PC	1	—	1.71x10 <sup>3</sup>	—
		2	—	1.65x10 <sup>3</sup>	—
		3	—	1.68x10 <sup>3</sup>	1.20x10 <sup>3</sup>
	R1	1	—	—	9.65x10 <sup>3</sup>
		2	—	—	5.60x10 <sup>3</sup>
		3	—	—	7.93x10 <sup>3</sup>
3 <sup>rd</sup>	R2	1	—	—	—
		2	—	—	—
		3	—	—	—
	NC	1	—	—	—
		2	—	—	—
		3	—	—	—
	PC	1	—	2.15x10 <sup>2</sup>	1.67x10 <sup>3</sup>
		2	—	1.27x10 <sup>2</sup>	5.00x10 <sup>4</sup>
		3	—	3.42x10 <sup>2</sup>	1.00x10 <sup>4</sup>
4 <sup>th</sup>	R1	1	—	—	—
		2	—	—	—
		3	—	—	—
	R2	1	—	—	—
		2	—	—	—
		3	—	—	—
	NC	1	—	—	—
		2	—	—	—
		3	—	—	—
5 <sup>th</sup>	PC	1	2.50x10 <sup>4</sup>	5.44x10 <sup>4</sup>	1.67x10 <sup>6</sup>
		2	6.33x10 <sup>4</sup>	8.44x10 <sup>4</sup>	6.33x10 <sup>4</sup>
		3	3.50x10 <sup>4</sup>	4.96x10 <sup>4</sup>	2.50x10 <sup>6</sup>
	R1	1	—	—	—
		2	—	—	—
		3	—	—	—
	R2	1	—	—	—
		2	—	—	—
		3	—	—	—
	NC	1	—	—	—
		2	—	—	—
		3	—	—	—
	PC	1	4.32x10 <sup>4</sup>	1.27x10 <sup>4</sup>	3.12x10 <sup>4</sup>
		2	8.50x10 <sup>5</sup>	2.27x10 <sup>5</sup>	6.83x10 <sup>5</sup>
		3	2.67x10 <sup>5</sup>	9.50x10 <sup>2</sup>	4.00x10 <sup>5</sup>
	R1	1	—	—	—
		2	—	—	—
		3	—	—	—
	R2	1	—	2.50x10 <sup>1</sup>	6.40x10 <sup>3</sup>
		2	—	—	—
		3	—	—	—
	NC	1	—	—	—
		2	—	—	—
		3	—	—	—
	PC	1	1.12x10 <sup>7</sup>	1.95x10 <sup>4</sup>	9.50x10 <sup>5</sup>
		2	4.67x10 <sup>6</sup>	1.27x10 <sup>6</sup>	4.67x10 <sup>5</sup>
		3	4.50x10 <sup>6</sup>	7.23x10 <sup>4</sup>	1.88x10 <sup>4</sup>

- indicates the absence of AR *E. coli* or AR *E. faecalis* in lettuce leaves samples or top soil samples;

R1 indicates UWTP effluent disinfected with H<sub>2</sub>O<sub>2</sub>/sunlight process for 300 min;

R2 indicates UWTP effluent disinfected with H<sub>2</sub>O<sub>2</sub>/sunlight process for 90 min;

Negative control (NC) refers to mineral (potable) water, whilst positive control (PC) refers to mineral (potable) water in which both AR strains were inoculated (~10<sup>5</sup> CFU mL<sup>-1</sup>).

\* in lettuce leaves samples AR strains are expressed as CFU 100mL<sup>-1</sup>;

\*\* in top soil samples AR strains are expressed as CFU 100g<sup>-1</sup> per dry weight.