



Table S1. Log cfu mL⁻¹ before and after treatment for 90 s with the 250-mL cylinder system.

Sample	Inoculum	Before Treatment	Iodine Pre-Treated Water ^a	Iodine Treatment after Addition of Inoculum ^b
Water	<i>Escherichia coli</i> K-12	6.13 (0.13) ^{c,d}	-	- ^e
	<i>Escherichia coli</i> O157:H7	6.49 (0.01)	-	-
	<i>Enterococcus fecalis</i>	6.56 (0.09)	-	-
	<i>Salmonella enterica</i>	6.28 (0.12)	-	-
Water & soil	<i>Escherichia coli</i> K-12	7.04 (0.20)	6.50 (0.01)	-
	<i>Escherichia coli</i> O157:H7	6.49 (0.01)	ND	-
	<i>Enterococcus fecalis</i>	6.43 (0.19)	ND	-
	<i>Salmonella enterica</i>	6.31 (0.04)	ND	-
Biofilms	<i>Acinetobacter baumannii</i>	7.16 (0.09)	ND	-
	<i>Staphylococcus aureus</i>	6.81 (0.23)	ND	-

^a I₂ vapor was infused 90 s before addition of bacteria. Bacteria were enumerated 90 s later.

^b Bacteria were added 10 s before I₂ vapor infusion

^c Average of biological triplicates.

^d Standard error of means (SEM)

^e -Below detection limit

^f ND = Not determined

Table S2. Log cfu mL⁻¹ before and after treatment at respective times with hand-pump bucket system (3 L test volume).

Water Source	Inoculum	Before Treatment	2 min	4 min	8 min	≥24 h
Distilled	<i>Escherichia coli</i> K-12	6.25 (0.05) ^a	- ^b	-	-	ND ^c
	<i>Salmonella enterica</i>	6.83 (0.07)	3.76 (1.11)	-	-	ND
	<i>Enterococcus fecalis</i>	6.41 (0.06)	3.33 (1.71)	-	-	ND
River	<i>Escherichia coli</i> K-12	6.55 (0.26)	6.46 (0.22)	6.23 (0.07)	2.78 (1.83)	2.34 (1.42)
	<i>Salmonella enterica</i>	6.87 (0.05)	6.77 (0.10)	6.70 (0.15)	6.30 (0.23)	3.85 (0.11)
	<i>Enterococcus fecalis</i>	6.18 (0.03)	4.22 (2.11)	3.89 (1.95)	3.84 (1.92)	3.66 (1.83)
Pond	<i>Escherichia coli</i> K-12	6.55 (0.26)	6.46 (0.22)	6.23 (0.07)	2.78 (1.83)	2.34 ^d (1.42)
	<i>Salmonella enterica</i>	6.77 (0.16)	6.71 (0.20)	6.68 (0.34)	5.01 (1.07)	4.09 ^d (0.75)
	<i>Enterococcus fecalis</i>	6.32 (0.07)	6.37 (0.04)	6.27 (0.04)	6.07 (0.27)	5.74 ^e (0.42)

^a Value is an average of biological triplicates; standard error of means (SEM)

^b -Below detection limit

^c ND = not determined.

^d 48 h incubation.

^e 72 h incubation.

Table S3. Log cfu mL⁻¹ of naturally occurring bacteria before and after treatment of different water samples (3 L fluid volume, high air volume).

Water Sample	Time (min)	Lennox Broth Agar	MacConkey Agar	
			Non-Lactose	Lactose
Lagoon ^a	0	6.01 (0.07) ^b	4.3	4.99 (0.01)
	4	4.38 (0.04)	4.34 (0.10)	4.23 (0.08)
	8	4.26 (0.02)	4.18 (0.10)	4.07 (0.01)
	16	4.21 (0.03)	2.66 (0.36)	3.44 (0.06)

Lagoon ^c	0	5.42 (0.02)	5.18 (0.02)	2.91 (0.01)
	4	5.42 (0.02)	5.28 (0.05)	2.91 (0.03)
	8	5.44 (0.04)	5.27 (0.05)	2.91 (0.07)
	16	5.41 (0.01)	5.23 (0.09)	2.84 (0.06)
Sewer ^d	0	3.54 (0.02)	2.63 (0.16)	2.18 (0.06)
	4	- ^e	-	-
	8	-	-	-
	16	-	-	-
Pond ^d	0	3.54 (0.02)	2.88(0.06)	1.302 (0.66)
	4	-	-	-
	8	-	-	-
	16	-	-	-

^a 20 ml of centrifuged dairy lagoon water was used.

^b Value is an average of biological triplicates; standard error of the mean (SEM).

^c 1 L of dairy lagoon water (not centrifuged) was used.

^d 3 L of sample water was used

^e-Below detection limit