

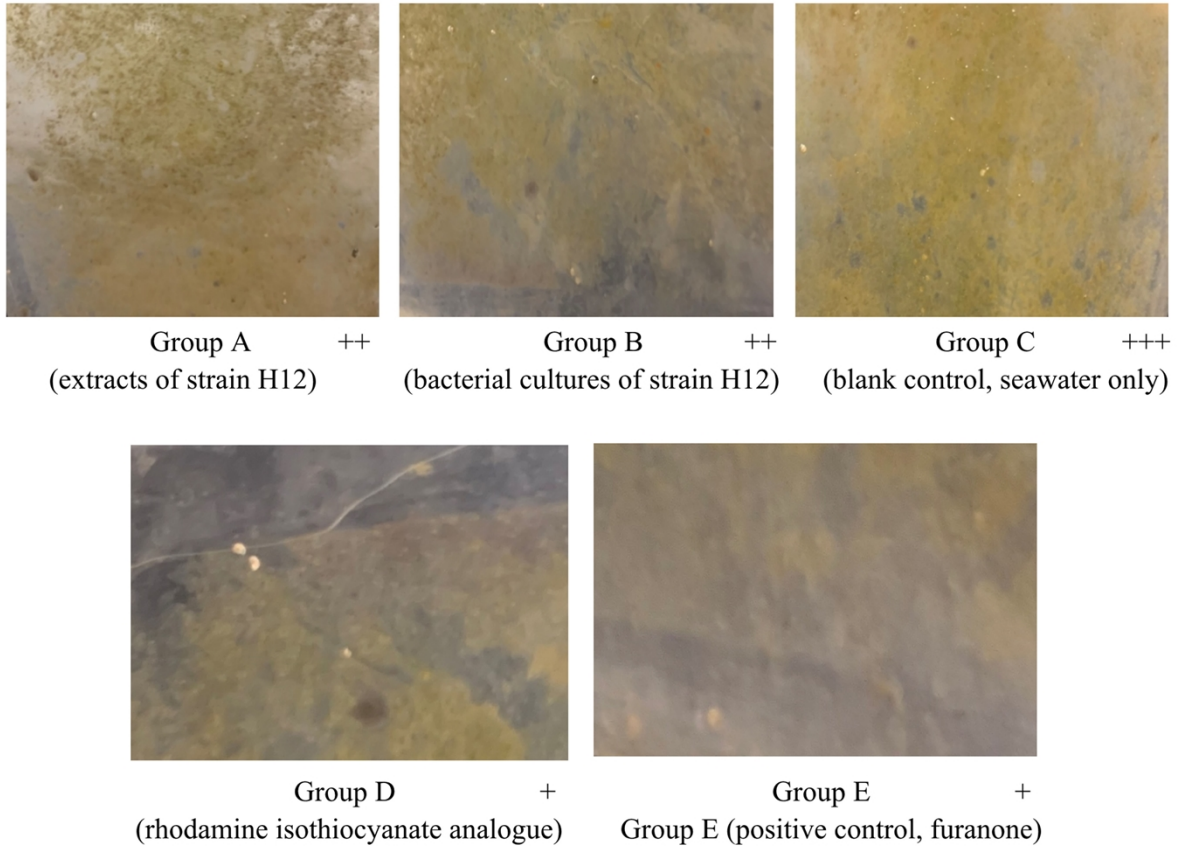
**The rhodamine isothiocyanate analogue as a quorum sensing inhibitor has  
the potential to control microbe-induced biofouling**

**Appendix:** Supplementary information

**Table S1.** Alpha diversity of biofilm microbial in various groups. The parameter values are presented as the mean  $\pm$  standard deviation from five measurements.

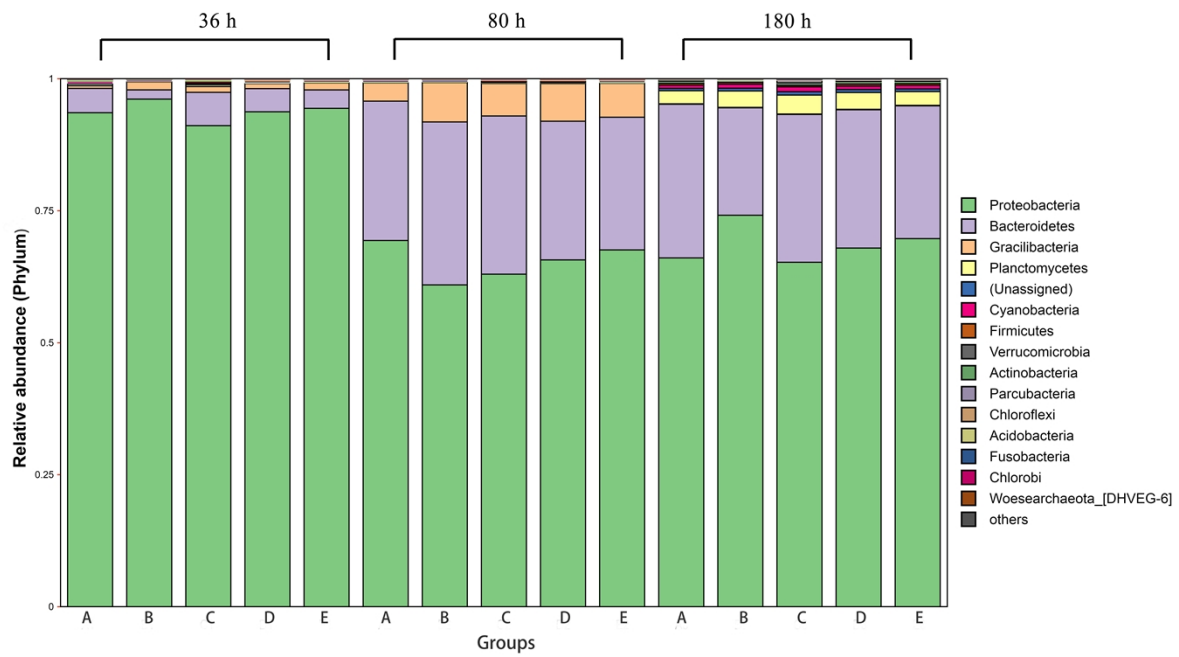
Samples	Richness	Chao 1	Shannon	Simpson
A-36h	2847.4 $\pm$ 719.6	2849.9 $\pm$ 719.42	3.854 $\pm$ 0.996	0.3424 $\pm$ 0.1536
B-36h	2150.6 $\pm$ 279.4	2153.8 $\pm$ 278.96	3.332 $\pm$ 0.278	0.2848 $\pm$ 0.0492
C-36h	2968 $\pm$ 577	2970.2 $\pm$ 576.38	4.408 $\pm$ 0.722	0.189 $\pm$ 0.059
D-36h	2739.6 $\pm$ 258.4	2742.3 $\pm$ 259	3.522 $\pm$ 0.668	0.3494 $\pm$ 0.2156
E-36h	2674.4 $\pm$ 343.6	2676.6 $\pm$ 342.92	3.51 $\pm$ 0.45	0.3704 $\pm$ 0.1416
A-80h	3378.8 $\pm$ 929.2	3381.0 $\pm$ 929.94	6.302 $\pm$ 0.238	0.04628 $\pm$ 0.01082
B-80h	3122.2 $\pm$ 632.8	3124.7 $\pm$ 633.98	5.9 $\pm$ 0.34	0.0649 $\pm$ 0.0278
C-80h	3620.2 $\pm$ 734.8	3622.5 $\pm$ 735.1	6.596 $\pm$ 0.734	0.0379 $\pm$ 0.0126
D-80h	3618.6 $\pm$ 976.4	3620.9 $\pm$ 977.36	6.028 $\pm$ 0.592	0.05584 $\pm$ 0.01626
E-80h	3523.2 $\pm$ 839.8	3525.4 $\pm$ 840.42	6.356 $\pm$ 0.414	0.04546 $\pm$ 0.02084
A-180h	3960.2 $\pm$ 300.8	3962.9 $\pm$ 300.3	7.056 $\pm$ 0.654	0.03476 $\pm$ 0.02204
B-180h	3702.6 $\pm$ 247.4	3705.4 $\pm$ 247.16	6.794 $\pm$ 0.406	0.0468 $\pm$ 0.0313
C-180h	3955 $\pm$ 815	3957.8 $\pm$ 814.32	6.984 $\pm$ 0.266	0.03292 $\pm$ 0.01368
D-180h	4063.6 $\pm$ 275.4	4066.2 $\pm$ 274.96	7.336 $\pm$ 0.164	0.02354 $\pm$ 0.00616
E-180h	3935.8 $\pm$ 363.2	3938.6 $\pm$ 363.16	7.17 $\pm$ 0.23	0.0265 $\pm$ 0.0125

**Figure S1.** The phenotypic response of biofilm formation subjected to QSI substances. The representative images of biofilm following a 80-h incubation were shown. The signs for biofilm status are divided into three levels, namely '+', mild biofouling; '++', moderate biofouling; and '+++', severe biofouling.



**Figure S2.** The microbiome structure of bacterial in five treatment groups across three time points at phylum (A) and family (B) levels .

A



B

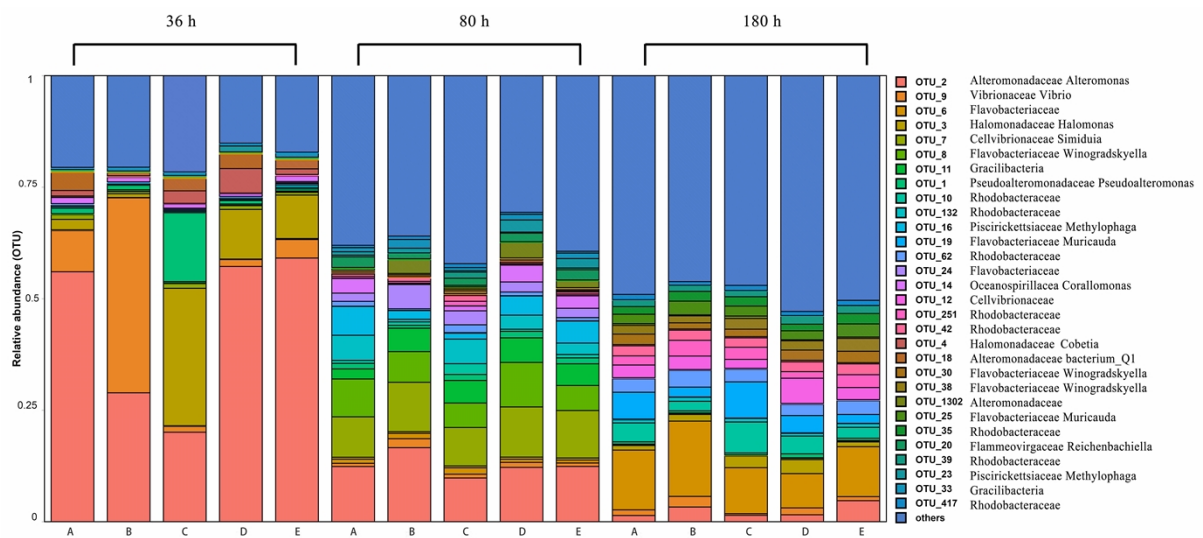


Figure S3. The effect of environmental parameters on microbial community.

