

Table S1. Summary of coral larval settlement assay results. *Lobophora*-conditioned seawater (LCW), *Lobophora* polar extract (LPE), *Lobophora* non-polar extract (LNPE) and *Lobophora* surface extract (LSE), crustose coralline algae (CCA), filtered seawater (FSW), methanol (MeOH).

Species	Treatment	Concentration	Equivalent <i>Lobophora</i> wet weight (g) per 100 cm ²	Replicate wells	Average # larvae not settled	Average # larvae settled	# wells with mortality present
<i>Acropora elseyi</i>	LCW	1	0.12	5	0.6	9.4	0
	LCW	2	0.23	5	0.8	8.8	1
	LCW	3	0.47	4	1.25	8.5	0
	LCW	4	0.94	5	0.2	9.4	1
	LCW	5	1.88	5	0.2	9.6	0
	LCW	6	3.75	5	0	9.6	0
	LCW	7	7.5	5	1.2	8.8	0
	LCW	8	15	5	1.2	9.4	0
	LNPE	Low	0.12	5	0.8	9	0
	LNPE	Medium	0.94	5	2	7.4	1
	LNPE	High	15	5	8	0	4
	LPE	Low	0.12	5	1.8	8	0
	LPE	Medium	0.94	5	2.6	6.4	1
	LPE	High	15	5	10	0	5
	LSE	Low	0.12	5	2	8.2	2
	LSE	Medium	0.94	5	0.8	8.8	2
	LSE	High	15	5	1.6	7.4	2
	Control LCW (no CCA)	8	15	5	8.2	1.6	1
	Negative control (FSW)	n/a	0	5	10.4	0	1
	Positive control (FSW+CCA+Rubble)	n/a	0	7	0.43	9.43	0
Vehicle control (MeOH)	n/a	0	5	2	7.4	0	
<i>Acropora hyacinthus</i>	LCW	1	0.12	5	0	10	0
	LCW	2	0.23	5	1.4	8.6	0
	LCW	3	0.47	5	0.8	9	0
	LCW	4	0.94	5	0.2	9.6	0
	LCW	5	1.88	5	0.4	9.6	0
	LCW	6	3.75	5	1.2	8.6	0
	LCW	7	7.5	5	1	8.6	0
	LCW	8	15	5	0.4	8.8	0
	LNPE	Low	0.12	5	0.6	9.4	0
	LNPE	Medium	0.94	5	0.8	9	0
	LNPE	High	15	4	7.5	0	4
	LPE	Low	0.12	5	1	9.2	0

	LPE	Medium	0.94	5	1.2	8.8	0
	LPE	High	15	5	10	0	5
	LSE	Low	0.12	5	0	10	0
	LSE	Medium	0.94	5	0.8	8.6	1
	LSE	High	15	5	0.6	9.4	0
	Control LCW (no CCA)	8	15	5	10	0	0
	Negative control (FSW)	n/a	0	5	10	0	0
	Positive control (FSW+CCA+Rubble)	n/a	0	7	0.43	9.43	0
	Vehicle control (MeOH)	n/a	0	5	0.4	9.6	1
<i>Acropora intermedia</i>	LCW	1	0.12	5	1.8	7.8	1
	LCW	2	0.23	5	3.6	5	2
	LCW	3	0.47	5	1	8.4	2
	LCW	4	0.94	5	2	7.6	1
	LCW	5	1.88	5	1.4	8.4	1
	LCW	6	3.75	5	1.8	6.6	3
	LCW	7	7.5	5	2.2	7.2	2
	LCW	8	15	5	1.6	7.6	2
	LNPE	Low	0.12	5	3.6	5.6	2
	LNPE	Medium	0.94	5	2.4	6.4	2
	LNPE	High	15	5	10	0.4	5
	LPE	Low	0.12	5	2.6	7.4	0
	LPE	Medium	0.94	5	2.4	6	3
	LPE	High	15	5	10	0	5
	LSE	Low	0.12	5	3	6.8	1
	LSE	Medium	0.94	5	3	3.6	5
	LSE	High	15	5	4.6	2	4
	Control LCW (no CCA)	8	15	5	7.2	0	3
	Negative control (FSW)	n/a	0	5	9.2	0	1
	Positive control (FSW+CCA+Rubble)	n/a	0	6	2.17	7.83	0
Vehicle control (MeOH)	n/a	0	5	2.2	7.4	1	
<i>Acropora millepora</i>	LCW	1	0.12	5	1	9	0
	LCW	2	0.23	5	0.2	9.8	0
	LCW	3	0.47	5	0.4	9.6	0
	LCW	4	0.94	5	0.4	9.6	0
	LCW	5	1.88	5	1.6	8.4	0
	LCW	6	3.75	5	0.2	9.8	0
	LCW	7	7.5	5	0.2	10	1

	LCW	8	15	5	0.2	9.8	0
	LNPE	Low	0.12	5	0.4	9.6	0
	LNPE	Medium	0.94	5	1.2	8.8	0
	LNPE	High	15	5	9.2	0	3
	LPE	Low	0.12	5	1.2	8.8	0
	LPE	Medium	0.94	5	1.4	8.6	0
	LPE	High	15	5	10	0	5
	LSE	Low	0.12	5	0.8	9.2	0
	LSE	Medium	0.94	5	0.2	9.8	0
	LSE	High	15	5	4	6	0
	Control LCW (no CCA)	8	15	5	6	4	0
	Negative control (FSW)	n/a	0	3	10	0	0
	Positive control (FSW+CCA+Rubble)	n/a	0	7	0	10	0
	Vehicle control (MeOH)	n/a	0	5	0.2	9.8	0
<i>Acropora muricata</i>	LCW	1	0.12	5	0.2	9.8	0
	LCW	2	0.23	5	0.2	9.8	0
	LCW	3	0.47	5	0.8	9.2	2
	LCW	4	0.94	5	0.6	9.2	0
	LCW	5	1.88	5	0.8	9	1
	LCW	6	3.75	5	0.4	9.6	0
	LCW	7	7.5	5	0	9.8	0
	LCW	8	15	5	0.8	9.2	0
	LNPE	Low	0.12	5	0.4	9.6	0
	LNPE	Medium	0.94	5	1.4	8.6	1
	LNPE	High	15	5	5.8	4.2	1
	LPE	Low	0.12	5	0.4	9.6	0
	LPE	Medium	0.94	5	2.8	7	1
	LPE	High	15	5	10	0	5
	LSE	Low	0.12	5	0.6	9.4	0
	LSE	Medium	0.94	5	1	8.6	0
	LSE	High	15	5	0.6	9.4	0
	Control LCW (no CCA)	8	15	5	8	2	0
	Negative control (FSW)	n/a	0	5	10	0	0
	Positive control (FSW+CCA+Rubble)	n/a	0	7	0.71	9.29	0
Vehicle control (MeOH)	n/a	0	5	0.2	9.8	0	

<i>Coelastrea aspera</i>	LCW	1	0.12	4	10	0	0
	LCW	2	0.23	4	10	0	0
	LCW	3	0.47	1	8	2	0
	LCW	4	0.94	1	10	0	0
	LCW	5	1.88	1	7	3	0
	LCW	6	3.75	3	7.67	2.33	0
	LCW	7	7.5	3	9	1	0
	LCW	8	15	3	8.33	1.67	0
	LNPE	Low	0.12	4	4.5	5.5	0
	LNPE	Medium	0.94	4	6.5	3.5	0
	LNPE	High	15	4	9.75	0.25	3
	LPE	Low	0.12	5	8	2	0
	LPE	Medium	0.94	5	7	3	0
	LPE	High	15	5	10	0	5
	LSE	Low	0.12	10	7.3	2.6	0
	LSE	Medium	0.94	10	7.9	2	0
	LSE	High	15	11	5.91	4.09	0
	Control LCW (no CCA)	8	15	3	10	0	0
	Negative control (FSW)	n/a	0	8	10	0	0
	Positive control (FSW+CCA+Rubble)	n/a	0	8	9.38	0.63	0
Vehicle control (MeOH)	n/a	0	9	7.22	2.78	0	
<i>Goniastrea retiformis</i>	LCW	1	0.12	5	0.4	9.6	0
	LCW	2	0.23	5	1	9	0
	LCW	3	0.47	6	2.67	7.33	0
	LCW	4	0.94	6	1.5	8.5	0
	LCW	5	1.88	6	1.5	7.5	1
	LCW	6	3.75	4	0.75	9.25	0
	LCW	7	7.5	4	1	9	0
	LCW	8	15	4	1.25	8.75	0
	LNPE	Low	0.12	5	0.4	9.4	0
	LNPE	Medium	0.94	5	1.4	8.4	0
	LNPE	High	15	5	5	0	5
	LPE	Low	0.12	5	4.2	5.8	0
	LPE	Medium	0.94	5	1.2	8.4	1
	LPE	High	15	5	8.2	0	5
	LSE	Low	0.12	5	0.2	9.8	0
	LSE	Medium	0.94	5	0.2	9.4	1
	LSE	High	15	5	0.6	9.4	0
	Control LCW (no CCA)	8	15	5	10	0	0

	Negative control (FSW)	n/a	0	5	10	0	0
	Positive control (FSW+CCA+Rubble)	n/a	0	7	2.71	7.57	0
	Vehicle control (MeOH)	n/a	0	5	0.6	9.4	0
<i>Montipora aequituberculata</i>	LCW	1	0.12	5	7.6	2.4	0
	LCW	2	0.23	5	7.2	2.8	0
	LCW	3	0.47	5	8.4	1.8	0
	LCW	4	0.94	5	4.8	5.4	0
	LCW	5	1.88	5	7.4	2.6	0
	LCW	6	3.75	5	7.2	2.8	0
	LCW	7	7.5	5	8.2	1.8	0
	LCW	8	15	5	8.2	1.8	0
	LNPE	Low	0.12	5	5.6	4.4	0
	LNPE	Medium	0.94	5	7	3	0
	LNPE	High	15	5	7.2	2.8	0
	LPE	Low	0.12	5	6.8	3.2	0
	LPE	Medium	0.94	5	7.4	2.6	0
	LPE	High	15	5	8.4	0.2	3
	LSE	Low	0.12	5	4	6	0
	LSE	Medium	0.94	5	6.8	3.2	0
	LSE	High	15	5	6.6	3.4	0
	Control LCW (no CCA)	8	15	5	10	0	0
	Negative control (FSW)	n/a	0	5	10	0	0
	Positive control (FSW+CCA+Rubble)	n/a	0	7	4.14	5.86	0
Vehicle control (MeOH)	n/a	0	5	8	2	0	
<i>Platygyra daedalea</i>	LCW	1	0.12	5	2.8	7.2	0
	LCW	2	0.23	5	1.2	8.8	0
	LCW	3	0.47	6	1.33	8.5	1
	LCW	4	0.94	6	1.33	8.67	0
	LCW	5	1.88	6	1.33	8.67	0
	LCW	6	3.75	4	2.25	7.75	0
	LCW	7	7.5	4	5.25	4.75	0
	LCW	8	15	4	5	5	0
	LNPE	Low	0.12	5	1.6	7.8	0
	LNPE	Medium	0.94	5	0.8	8.8	1
	LNPE	High	15	5	9.8	0.2	1
	LPE	Low	0.12	5	1.2	8.8	0
	LPE	Medium	0.94	5	4.2	5.8	0

LPE	High	15	5	9.8	0	2
LSE	Low	0.12	8	0.5	9.25	1
LSE	Medium	0.94	8	1.13	8.88	0
LSE	High	15	8	1.88	8.25	0
Control LCW (no CCA)	8	15	5	10	0	0
Negative control (FSW)	n/a	0	10	10	0	0
Positive control (FSW+CCA+Rubble)	n/a	0	10	0.8	9.2	0
Vehicle control (MeOH)	n/a	0	5	3	7	0

Table S2. Average pH and dissolved oxygen (mg L^{-1}) per treatment for *Acropora hyacinthus* assays after 48 hours. Standard errors included in parentheses.

Treatment	Average pH (SE)	Average dissolved oxygen (mg L^{-1})(SE)
Negative control	8.19 (0.00)	7.44 (0.04)
Positive control	8.08 (0.02)	7.14 (0.12)
Vehicle control	8.13 (0.01)	6.82 (0.39)
LCW1	8.07 (0.00)	6.78 (0.23)
LSE-Low	8.08 (0.01)	7.61 (0.21)
LSE-High	8.04 (0.02)	7.26 (0.09)
LNPE-Low	8.05 (0.01)	6.84 (0.06)
LNPE-High	8.01 (0.02)	6.65 (0.11)
LPE-Low	8.07 (0.01)	6.71 (0.12)
LPE-Medium	NA	7.32 (0.09)
LPE-High	7.78 (0.06)	5.43 (0.17)

Table S3. Generalized linear model summary statistics predicting dissolved oxygen (mg L⁻¹) based on treatment. Significant p-values are indicated in bold.

Coefficients	Estimate	Standard Error	t value	Pr(> t)
(Intercept-Vehicle control)	1.920	0.026	74.381	< 0.001
LCW8	-0.006	0.037	-0.174	0.864
LNPE-High	-0.026	0.037	-0.696	0.494
LNPE-Low	0.003	0.036	0.08	0.937
LPE-High	-0.228	0.041	-5.509	< 0.001
LPE -Medium	0.070	0.035	1.985	0.060
LPE -Low	-0.017	0.037	-0.468	0.644
LSE -High	0.062	0.035	1.764	0.092
LSE -Low	0.109	0.035	3.147	0.005
Negative control	0.087	0.035	2.483	0.021
Positive control	0.045	0.036	1.27	0.217

Table S4. Pair-wise comparisons for the differences in dissolved oxygen (mg L⁻¹) among treatments. P values represent Tukey pair-wise comparison P-values. Significant p-values are indicated in bold.

Contrast		Estimate	Standard Error	df	t.ratio	p.value
Vehicle control	LCW8	0.006	0.0366	22	0.174	1.000
Vehicle control	Negative control	-0.087	0.035	22	-2.483	0.364
Vehicle control	LNPE-High	0.026	0.037	22	0.696	1.000
Vehicle control	LNPE -Low	-0.003	0.0365	22	-0.08	1.000
Vehicle control	LPE -High	0.228	0.0415	22	5.509	0.001
Vehicle control	LPE -Low	0.017	0.0368	22	0.468	1.000
Vehicle control	LPE -Medium	-0.070	0.0353	22	-1.985	0.660
Vehicle control	Positive control	-0.045	0.0357	22	-1.27	0.965
Vehicle control	LSE -High	-0.062	0.0354	22	-1.764	0.788
Vehicle control	LSE -Low	-0.109	0.0347	22	-3.147	0.118
LCW8	Negative control	-0.093	0.0351	22	-2.656	0.280
LCW8	LNPE -High	0.019	0.0371	22	0.522	1.000
LCW8	LNPE -Low	-0.009	0.0366	22	-0.254	1.000
LCW8	LPE -High	0.222	0.0416	22	5.342	0.001
LCW8	LPE -Low	0.011	0.0369	22	0.294	1.000
LCW8	LPE -Medium	-0.076	0.0354	22	-2.159	0.553
LCW8	Positive control	-0.052	0.0358	22	-1.444	0.923
LCW8	LSE -High	-0.069	0.0355	22	-1.937	0.689
LCW8	LSE -Low	-0.115	0.0348	22	-3.319	0.084
Negative control	LNPE -High	0.113	0.0355	22	3.173	0.112
Negative control	LNPE -Low	0.084	0.035	22	2.403	0.407

Negative control	LPE -High	0.315	0.0402	22	7.854	< 0.0001
Negative control	LPE -Low	0.104	0.0354	22	2.948	0.171
Negative control	LPE -Medium	0.017	0.0338	22	0.5	1.000
Negative control	Positive control	0.042	0.0342	22	1.217	0.973
Negative control	LSE -High	0.024	0.0339	22	0.722	1.000
Negative control	LSE -Low	-0.022	0.0331	22	-0.669	1.000
LNPE-High	LNPE -Low	-0.029	0.0369	22	-0.776	0.999
LNPE-High	LPE -High	0.203	0.0419	22	4.839	0.003
LNPE-High	LPE -Low	-0.008	0.0373	22	-0.227	1.000
LNPE-High	LPE -Medium	-0.096	0.0358	22	-2.677	0.271
LNPE-High	Positive control	-0.071	0.0362	22	-1.964	0.673
LNPE-High	LSE -High	-0.088	0.0359	22	-2.456	0.378
LNPE-High	LSE -Low	-0.135	0.0352	22	-3.833	0.029
LNPE-Low	LPE -High	0.231	0.0414	22	5.586	0.001
LNPE-Low	LPE -Low	0.020	0.0368	22	0.549	1.000
LNPE-Low	LPE -Medium	-0.067	0.0352	22	-1.905	0.708
LNPE-Low	Positive control	-0.042	0.0357	22	-1.19	0.977
LNPE-Low	LSE -High	-0.060	0.0354	22	-1.684	0.828
LNPE-Low	LSE -Low	-0.106	0.0346	22	-3.067	0.137
LPE-High	LPE -Low	-0.211	0.0417	22	-5.059	0.002
LPE-High	LPE -Medium	-0.298	0.0404	22	-7.389	< 0.0001
LPE-High	Positive control	-0.274	0.0408	22	-6.717	< 0.0001
LPE-High	LSE -High	-0.291	0.0405	22	-7.182	< 0.0001
LPE-High	LSE -Low	-0.338	0.0399	22	-8.469	< 0.0001
LPE-Low	LPE -Medium	-0.087	0.0356	22	-2.451	0.381
LPE-Low	Positive control	-0.063	0.036	22	-1.737	0.802
LPE-Low	LSE -High	-0.080	0.0358	22	-2.23	0.509
LPE-Low	LSE -Low	-0.126	0.035	22	-3.609	0.047
LPE-Medium	Positive control	0.025	0.0345	22	0.717	1.000
LPE-Medium	LSE -High	0.008	0.0342	22	0.222	1.000
LPE-Medium	LSE -Low	-0.039	0.0334	22	-1.169	0.980
Positive control	LSE -High	-0.017	0.0346	22	-0.495	1.000
Positive control	LSE -Low	-0.064	0.0338	22	-1.884	0.721
LSE-High	LSE -Low	-0.047	0.0335	22	-1.391	0.938

Table S5. Generalized linear model summary statistics predicting pH based on treatment. Significant p-values are indicated in bold.

Coefficients	Estimate	Std.Error	t value	Pr(> t)
(Intercept- Vehicle control)	2.095	0.003	729.711	< 0.001
LCW8	-0.007	0.004	-1.818	0.084
LNPE-High	-0.014	0.004	-3.535	0.002
LNPE -Low	-0.009	0.004	-2.222	0.038
LPE-High	-0.044	0.004	-10.601	< 0.001
LPE -Low	-0.007	0.004	-1.717	0.101
LSE -High	-0.011	0.004	-2.626	0.016
LSE -High	-0.005	0.004	-1.313	0.204
Negative control	0.007	0.004	1.818	0.084
Positive control	-0.006	0.004	-1.515	0.145

Table S6. Pair-wise comparisons for the differences in pH among treatments. P values represent Tukey pair-wise comparison P-values. Significant p-values are indicated in bold.

Contrast		estimate	SE	df	t.ratio	p.value
Vehicle control	LCW8	0.007	0.004	20.000	1.818	0.718
Vehicle control	Negative	-0.007	0.004	20.000	-1.818	0.718
Vehicle control	LNPE -High	0.014	0.004	20.000	3.535	0.051
Vehicle control	LNPE -Low	0.009	0.004	20.000	2.222	0.474
Vehicle control	LPE -High	0.044	0.004	20.000	10.601	< 0.0001
Vehicle control	LPE -Low	0.007	0.004	20.000	1.717	0.774
Vehicle control	Positive	0.006	0.004	20.000	1.515	0.871
Vehicle control	LSE -High	0.011	0.004	20.000	2.626	0.268
Vehicle control	LSE -Low	0.005	0.004	20.000	1.313	0.939
LCW8	Negative control	-0.015	0.004	20.000	-3.636	0.041
LCW8	LNPE -High	0.007	0.004	20.000	1.717	0.774
LCW8	LNPE -Low	0.002	0.004	20.000	0.404	1.000
LCW8	LPE -High	0.037	0.004	20.000	8.785	< 0.0001
LCW8	LPE -Low	0.000	0.004	20.000	-0.101	1.000
LCW8	Positive control	-0.001	0.004	20.000	-0.303	1.000
LCW8	LSE -High	0.003	0.004	20.000	0.808	0.998
LCW8	LSE -Low	-0.002	0.004	20.000	-0.505	1.000
Negative control	LNPE -High	0.022	0.004	20.000	5.353	0.001
Negative control	LNPE -Low	0.016	0.004	20.000	4.040	0.018
Negative control	LPE -High	0.051	0.004	20.000	12.415	< 0.0001
Negative control	LPE -Low	0.014	0.004	20.000	3.535	0.051
Negative control	Positive control	0.014	0.004	20.000	3.333	0.076
Negative control	LSE -High	0.018	0.004	20.000	4.444	0.007
Negative control	LSE -Low	0.013	0.004	20.000	3.131	0.111
-High	-Low	-0.005	0.004	20.000	-1.313	0.939

LNPE -High	LPE -High	0.030	0.004	20.000	7.069	< 0.0001
LNPE -High	LPE -Low	-0.007	0.004	20.000	-1.818	0.718
LNPE -High	Positive control	-0.008	0.004	20.000	-2.020	0.596
LNPE -High	LSE -High	-0.004	0.004	20.000	-0.909	0.994
LNPE -High	LSE -Low	-0.009	0.004	20.000	-2.222	0.474
LNPE -Low	LPE -High	0.035	0.004	20.000	8.381	< 0.0001
LNPE -Low	LPE -Low	-0.002	0.004	20.000	-0.505	1.000
LNPE -Low	Positive control	-0.003	0.004	20.000	-0.707	0.999
LNPE -Low	LSE -High	0.002	0.004	20.000	0.404	1.000
LNPE -Low	LSE -Low	-0.004	0.004	20.000	-0.909	0.994
LPE -High	LPE -Low	-0.037	0.004	20.000	-8.886	< 0.0001
LPE -High	Positive control	-0.038	0.004	20.000	-9.088	< 0.0001
LPE -High	LSE -High	-0.033	0.004	20.000	-7.978	< 0.0001
LPE -High	LSE -Low	-0.039	0.004	20.000	-9.289	< 0.0001
LPE -Low	Positive control	-0.001	0.004	20.000	-0.202	1.000
LPE -Low	LSE -High	0.004	0.004	20.000	0.909	0.994
LPE -Low	LSE -Low	-0.002	0.004	20.000	-0.404	1.000
Positive control	LSE -High	0.005	0.004	20.000	1.111	0.978
Positive control	LSE -Low	-0.001	0.004	20.000	-0.202	1.000
LSE -High	LSE -Low	-0.005	0.004	20.000	-1.313	0.939

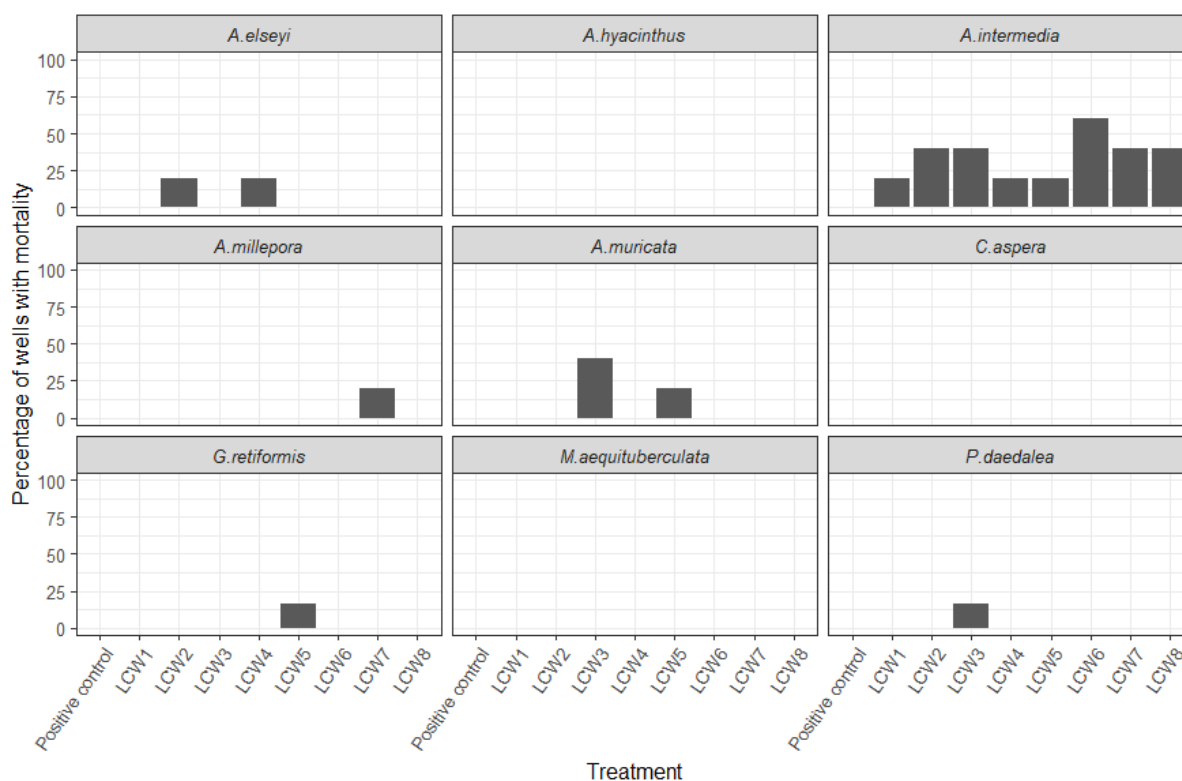


Figure S1. Percentage of wells experiencing larval mortality per *Lobophora*-conditioned water (LCW) concentration per coral species (see Table 1). LCW1 – LCW8 refers to the treatment concentrations with LCW1 the lowest and LCW8 the highest (Fig. 1)

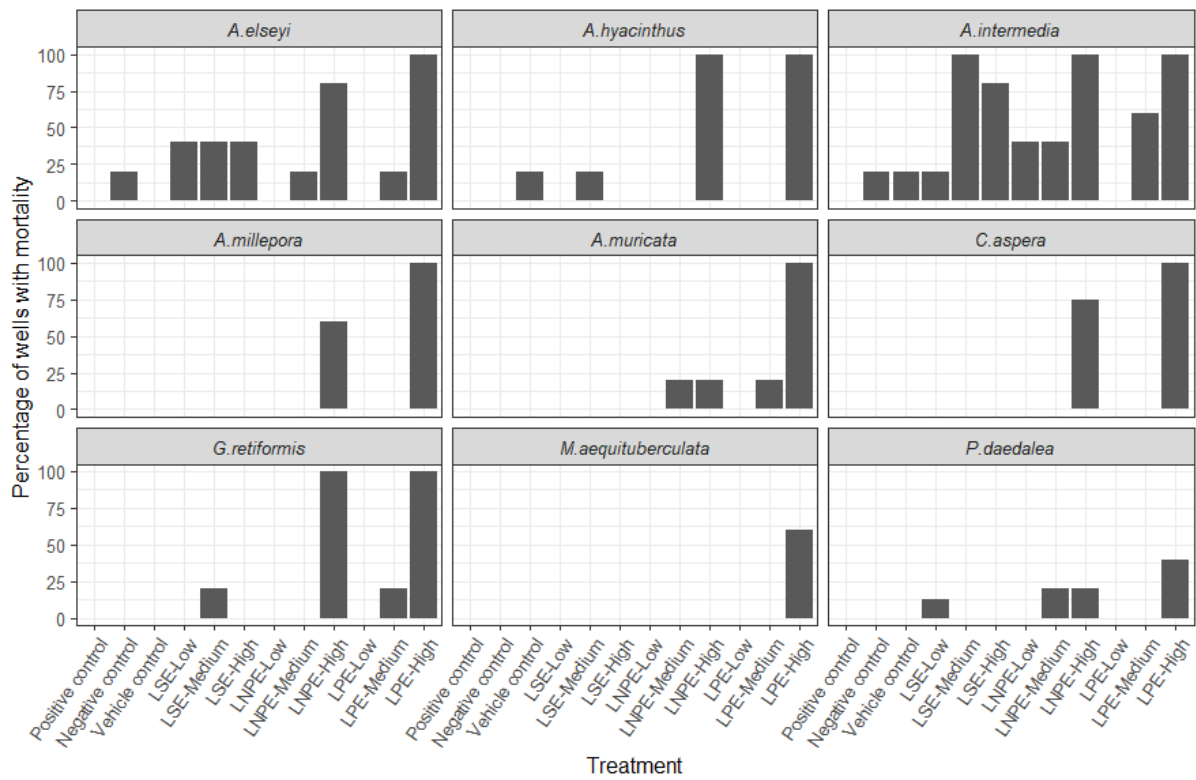


Figure S2. Percentage of wells with larval mortality present per *Lobophora* extract and control treatment per coral species.