

## APPENDIX S1

Summary of results of the two-way non-parametric (Scheirer-Ray-Hare) tests testing the effects of the temperature-pH scenario, nutrient enrichment, and their interaction in *L. coralliooides*, *P. calcareum*, and *L. incrustans* Chlorophyll *a* and CaCO<sub>3</sub> contents in winter and summer conditions (n=3). Comparison among seasons was done using a one-way non-parametric (Kruskal-Wallis) test.

		Chlorophyll <i>a</i>			CaCO <sub>3</sub>	
		df	F	p-value	F	p-value
<i>L. coralliooides/</i> WINTER	Scenario	1	0.02	0.873	0.10	0.749
	Nutrients	1	6.56	<b>0.010*</b>	3.69	0.055
	Interaction	1	0.41	0.522	2.08	0.149
<i>P. calcareum/</i> WINTER	Scenario	1	1.26	0.262	0.92	0.337
	Nutrients	1	7.41	<b>0.006**</b>	1.26	0.262
	Interaction	1	0.23	0.631	0.41	0.522
<i>L. incrustans/</i> WINTER	Scenario	1	0.16	0.688	3.69	0.055
	Nutrients	1	8.34	<b>0.004**</b>	0.41	0.522
	Interaction	1	0.78	0.378	0.26	0.262
<i>L. coralliooides/</i> SUMMER	Scenario	1	2.08	0.149	8.31	<b>0.004**</b>
	Nutrients	1	0.03	0.873	0.00	1.000
	Interaction	1	0.23	0.631	0.15	0.149
<i>P. calcareum/</i> SUMMER	Scenario	1	2.56	0.109	0.03	0.873
	Nutrients	1	0.10	0.749	0.41	0.522
	Interaction	1	1.26	0.262	8.31	<b>0.004**</b>
<i>L. incrustans/</i> SUMMER	Scenario	1	7.41	<b>0.006**</b>	0.00	1.00
	Nutrients	1	0.10	0.749	0.23	0.631
	Interaction		0.92	0.337	2.56	0.109
<i>L. coralliooides</i>	Season	1	17.28	< 0.001***	0.96	0.326
<i>P. calcareum</i>	Season	1	17.28	< 0.001***	0.01	0.908
<i>L. incrustans</i>	Season	1	17.29	< 0.001***	6.45	<b>0.011*</b>