Supplementary Materials: Lobster supply chains are not at risk from paralytic shellfish toxin accumulation during wet storage

Alison Turnbull, Andreas Seger, Jessica Jolley, Gustaaf Hallegraeff, Graeme Knowles and Quinn Fitzgibbon

Table S1. The median and standard deviation of behavioural, immunological and biochemical parameters measured in control and PST exposed *J. edwardsii* over different time periods

Day	0	7			21		
Treatment	Control	Control	Low Exposed	High Exposed	Control	Low Exposed	High Exposed
PST (mg STX.2HCL equiv. kg^{-1})	0.03 ± 0.01	0.03 ± 0.02	0.04 ± 0.03	0.02 ± 0.01	0.01 ± 0.01	0.01 ± 0.01	0.02 ± 0.0
Time to right	6.7 ± 6.9	3.4 ± 3.4	5.5 ± 9.9	5.9 ± 1.3	2.6 ± 1.5	3.6 ± 1.8	1.6 ± 0.7
Haemo-cyte count (' 000 cells mL^{-1})	120 ± 80	120 ± 40	210 ± 80	220 ± 50	310 ± 130	250 ± 110	290 ± 80
Bacterae-mia ZMA (cells mL^{-1})	755 ± 1873	906 ± 1828	275 ± 630	268 ± 361	37 ± 72	335 ± 110	165 ± 80
Bacterae-mia TCBS (cells mL^{-1})	246 ± 628	319 ± 438	104 ± 173	234 ± 358	46 ± 108	61 ± 128	339 ± 819
Brix	9.6 ± 4.4	12 ± 3.3	12.5 ± 2.7	13.0 ± 3.3	13.8 ± 3.1	13.0 ± 2.7	13.4 ± 3.3
pH	7.62 ± 0.09	7.62 ± 0.09	7.55 ± 0.04	7.60 ± 0.11	7.59 ± 0.16	7.48 ± 0.08	7.50 ± 0.05
Na^+ (mmol L^{-1})	504 ± 16	498 ± 10	485 ± 23	492 ± 12	500 ± 12	490 ± 22	500 ± 18

K^+ (mmol L^{-1})	9.0 ± 0.9	8.1 ± 1.3	8.6 ± 0.4	9.0 ± 0.8	8.3 ± 1.2	8.7 ± 0.8	8.2 ± 1.1
Na^+:K^+	56 ± 5	63 ± 11	56 ± 2	55 ± 4	62 ± 12	56 ± 5	61 ± 9
Cl^- (mmol L^{-1})	507 ± 22	499 ± 12	482 ± 32	492 ± 14	506 ± 35	485 ± 31	499 ± 25
Ca^{2+} (mmol L^{-1})	14.4 ± 2.6	15.0 ± 2.6	14.9 ± 2.1	14.7 ± 1.0	15.9 ± 1.4	15.8 ± 1.4	15.6 ± 1.8
P^{3-} (mmol L^{-1})	0.6 ± 0.6	0.7 ± 0.7	1.1 ± 0.9	0.8 ± 0.5	0.9 ± 0.3	1.2 ± 1.0	1.1 ± 0.6
Mg^{2+} (mmol L^{-1})	9.7 ± 1.7	8.8 ± 1.3	9.2 ± 1.3	9.3 ± 0.7	10.7 ± 2.1	10.1 ± 1.4	10.2 ± 2.2
Gluc (mmol L^{-1})	2.0 ± 1.9	2.2 ± 1.0	2.0 ± 1.1	1.7 ± 0.5	1.1 ± 0.5	1.5 ± 0.9	2.7 ± 1.5
Lact (mmol L^{-1})	0.27 ± 0.16	0.26 ± 0.17	0.43 ± 0.20	0.60 ± 0.36	0.37 ± 0.18	0.58 ± 0.41	0.38 ± 0.34
HCO_3^- (mmol L^{-1})	5.4 ± 1.5	3.9 ± 1.8	4.5 ± 0.8	4.4 ± 0.5	5.5 ± 1.7	5.2 ± 0.8	5.4 ± 1.2
Chol (mmol L^{-1})	0.41 ± 0.31	0.57 ± 0.22	0.65 ± 0.47	0.47 ± 0.13	0.81 ± 0.27	0.56 ± 0.15	0.70 ± 0.39
Trigly (mmol L^{-1})	0.37 ± 0.33	0.61 ± 0.20	0.70 ± 0.38	0.55 ± 0.18	0.87 ± 0.31	0.56 ± 0.14	0.70 ± 0.38
TProt (g L^{-1})	50 ± 32	60 ± 23	64 ± 20	61 ± 18	78 ± 21	67 ± 20	70 ± 22
Alb (g L^{-1})	7.3 ± 4.3	6.4 ± 1.5	7.3 ± 3.8	7.8 ± 2.2	11.3 ± 4.2	8.1 ± 2.3	7.8 ± 2.6
Glob (g L^{-1})	42 ± 28	53 ± 24	57 ± 21	53 ± 16	67 ± 19	59 ± 20	63 ± 21
A:G	0.20 ± 0.07	0.14 ± 0.06	0.14 ± 0.07	0.15 ± 0.04	0.18 ± 0.06	0.15 ± 0.06	0.13 ± 0.05
UA (µmol L^{-1})	16 ± 20	14 ± 17	26 ± 23	24 ± 18	30 ± 15	23 ± 13	32 ± 15
Lip (g L^{-1})	3.0 ± 0.8	4.1 ± 1.3	5.4 ± 1.9	4.8 ± 1.3	4.3 ± 0.8	5.0 ± 1.3	5.0 ± 1.3
GD (g L^{-1})	9.6 ± 3.5	19.6 ± 10.4	15.0 ± 8.6	16.5 ± 4.2	16 ± 6.0	16.8 ± 5.4	20.1 ± 8.4

Measured Osmolality	1043 ± 41	1029 ± 34	1010 ± 28	1033 ± 25	1007 ± 49	1034 ± 15	1020 ± 31

Table S2. Frequency table of reflex impairment scores (RIS) for *J. edwardsii* control low and high exposure treatment groups (0, 1x10^5 and 2x10^5 cells *A. catenella* respectively) on days 0, 7 and 21.

		Days		
RIS	**Treatment**	**0**	**7**	**21**
1	Control	1	1	0
	Low exposure		3	1
	High exposure		3	3
2	Control	1	3	2
	Low exposure		2	1
	High exposure		0	1
3	Control	2	1	2
	Low exposure		2	2
	High exposure		1	0
4	Control	2	1	0
	Low exposure		0	0
	High exposure		1	0
5	Control	1	1	2
	Low exposure		0	3
	High exposure		0	1
6	Control	0	0	1
	Low exposure		0	0
	High exposure		1	1

Table S3. Reflex impairment scores in relation to vitality in *J. edwardsii.* All treatment groups combined.

	Reflex Impairment Score					
Vitality	**1**	**2**	**3**	**4**	**5**	**6**
3	0	0	0	0	1	2
4	1	0	1	2	3	0
5	11	9	9	2	4	1