

**Table S1.** Raw data for free amino acids analysis of white shrimps (*Penaeus vannamei*).

Amino acid mg/100g	A: Short-term culture (27 days, n = 3)			B: Long-term culture (160 days, n = 6)						C : Local samples (N/A days, seawater 15-32 psu, n = 6)					
	A1	A2	A3	B1	B2	B3	B4	B5	B6	C1	C2	C3	C4	C5	C6
Asp	0.00	3.64	0.00	0.00	0.00	0.00	6.44	0.00	0.00	0.00	0.00	0.00	12.67	10.26	8.72
Glu	57.78	42.60	60.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ser	19.25	12.33	17.30	7.63	7.42	7.31	6.07	6.45	6.96	132.84	155.66	86.36	139.70	102.11	68.40
Gly	1828.15	1561.85	1295.31	670.83	677.63	739.46	636.66	639.60	689.50	362.58	304.29	318.57	371.16	278.48	243.27
His	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arg	1508.78	1241.12	925.09	385.93	539.11	605.57	685.89	636.53	553.58	344.14	334.05	381.67	339.40	246.56	220.13
Thr	0.00	0.00	22.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ala	62.57	129.24	51.73	30.43	29.80	51.45	35.15	44.27	39.35	83.47	85.47	58.51	94.65	58.56	59.17
Pro	413.44	102.77	222.83	47.42	15.96	16.81	15.52	27.69	19.85	329.06	329.03	286.28	356.37	305.93	307.62
Tyr	22.63	10.54	11.07	11.87	8.77	7.62	7.50	36.46	7.46	18.45	24.83	9.97	17.43	14.42	9.93
Val	16.94	6.07	14.14	9.23	0.00	6.81	8.69	7.59	6.27	12.53	21.66	12.72	24.59	19.21	15.14
Met	9.87	7.08	9.15	8.14	9.00	11.93	6.97	6.59	8.27	6.77	6.28	8.17	10.19	7.69	5.90
Cys	33.10	7.17	4.18	18.01	17.08	19.82	22.45	20.16	13.81	31.02	18.18	21.27	23.40	17.79	18.19
Ile	19.03	5.85	8.31	7.97	0.00	29.40	6.04	15.24	0.00	0.00	17.32	7.80	12.71	11.18	8.98
Leu	34.93	19.66	18.11	38.03	52.73	75.40	65.94	70.79	54.73	0.00	28.77	21.76	31.95	22.59	18.50
Phe	11.60	4.26	6.17	8.62	0.00	8.27	8.62	8.54	7.36	52.53	12.08	7.50	8.74	10.48	9.21
Lys	31.84	16.67	15.47	42.45	38.78	38.80	43.38	34.35	39.75	55.42	15.01	10.20	19.96	10.39	9.63
<b>Total</b>	<b>4069.92</b>	<b>3170.85</b>	<b>2681.12</b>	<b>1286.56</b>	<b>1396.29</b>	<b>1618.65</b>	<b>1555.32</b>	<b>1554.26</b>	<b>1446.88</b>	<b>1428.80</b>	<b>1352.62</b>	<b>1230.78</b>	<b>1462.93</b>	<b>1115.64</b>	<b>1002.79</b>

**Table S2.** Raw data for free amino acids analysis of groupers (*Epinephelus Lanceolatus*).

Amino acid mg/100g	A: Short-term culture (27 days, n = 3)			B: Long-term culture (75 days, n = 6)						C: Local samples (N/A, n = 3)		
	A1	A2	A3	B1	B2	B3	B4	B5	B6	C1	C2	C3
Asp	0.00	0.00	0.00	0.00	8.12	10.25	9.35	6.51	0.00	0.00	0.00	0.00
Glu	21.62	14.34	20.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ser	42.23	32.14	36.15	30.19	35.78	54.21	55.29	76.90	29.42	39.38	0.00	0.00
Gly	121.50	265.41	166.38	22.67	37.58	42.31	49.05	32.12	36.01	43.90	94.93	82.49
His	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arg	364.73	539.19	467.47	162.82	321.60	384.68	350.42	255.71	177.26	131.91	197.84	185.92
Thr	22.13	16.75	18.24	0.00	0.00	0.00	0.00	0.00	8.89	10.31	14.12	14.30
Ala	79.11	68.29	56.09	11.81	24.62	29.01	20.04	71.81	35.22	11.56	17.17	16.93
Pro	24.01	11.35	26.50	44.90	58.60	99.29	69.87	84.81	4.88	40.00	52.28	51.18
Tyr	0.00	0.00	0.00	80.17	12.04	7.30	8.03	11.61	83.90	10.62	11.58	12.03
Val	1.12	1.18	1.78	6.80	10.33	14.21	10.74	5.31	7.05	6.23	8.87	8.17
Met	2.26	2.04	2.78	7.30	12.43	10.33	10.15	11.29	6.61	10.71	11.10	11.95
Cys	10.36	6.54	8.15	17.22	23.53	20.81	21.59	21.00	13.74	21.90	19.49	22.98
Ile	0.00	6.10	2.21	0.00	0.00	0.00	5.76	0.00	0.00	0.00	0.00	0.00
Leu	7.29	12.42	11.79	23.22	35.18	28.80	38.99	32.03	14.85	7.90	10.16	11.29
Phe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lys	14.13	16.29	14.91	4.29	5.54	3.49	4.21	4.17	3.31	14.80	23.85	22.53
Total	710.49	992.04	832.71	411.39	585.36	704.68	653.47	613.28	421.14	349.21	461.41	439.77