

Evaluation of soybean stinkbug (*Riptortus pedestris*) powder, as a food ingredient and its nutritional composition

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Electronic supplementary material

Supplementary Tables S1 and S2

Table S1. Chemical composition of some stinkbugs and common foods

Compo- nents	<i>Riptortus pedestris</i>		<i>Sphaerodema</i>	<i>Mictis</i>	<i>Eusthenes</i>	<i>Cyclopelta</i>	<i>Tessaratomia</i>	<i>Halyomor-</i>	<i>Dolycoris</i>	<i>Urochela</i>
	Fresh weight	Dry weight	<i>rustica</i> ^a	<i>tenebrosa</i> ^a	<i>saevus</i> ^a	<i>parvaa</i> ^a	<i>papillosa</i> ^a	<i>pha picus</i> ^b	<i>baccarum</i> ^b	<i>luteovaria</i> ^b
Moisture (g 100 g ⁻¹)	15.6 ± 0.25	–	–	–	–	–	–	–	–	–
Crude fat (g 100 g ⁻¹)	15.2 ± 0.25	18.01 ± 0.86	9.43	34.2	33.5	44.3	42.6	32.31	37.71	26.19
Protein (g 100 g ⁻¹)	65.5 ± 0.1	77.61 ± 0.45	73.52	54.92	49.62	42.49	38.67	60.87	55.89	58.16
Ash (%)	3.5 ± 0.36	4.15 ± 0.13	2.99	1.24	1.35	1.45	1.05	4.47	5.89	6.92
Reducing sugar (g 100 g ⁻¹)	0.21 ± 0.04	0.25 ± 0.02	–	–	–	–	–	–	–	–

Data in this study (*Riptortus pedestris*) are expressed as mean ± SD ($n = 3$). “–” not reported. ^{a, b, c, d, e, f} cited from Feng et al. (2000), Ma (2012), Li and Li (2010), Musundire et al. (2016), Ramos-Elorduy et al. (1997), and Yang (2018), respectively.

Table S1. to be continued

Components	<i>Aspongopus</i>	<i>Encosternum</i>	<i>Edessa peter-</i>	<i>Euschistus</i>	<i>Pachilis</i>	<i>Corisella</i>	<i>Acantoceph-</i>	Eggs ^f	Soybean ^f
	<i>chinensis</i> ^c	<i>delegorguei</i> ^d	<i>sii</i> ^e	<i>egglestoni</i> ^e	<i>gigas</i> ^e	<i>mercenaria</i> ^e	<i>ala declivis</i> ^e		
Moisture (g 100 g ⁻¹)	–	–	–	–	–	–	–	75.8	10.2
Crude fat (g 100 g ⁻¹)	53	62.4	42	45	19	9	45	9	16
Protein (g 100 g ⁻¹)	44.3	33.2	37	35	65	58	35	12.7	35
Ash (%)	–	–	–	–	–	–	–	1	4.6
Reducing sugar (g 100 g ⁻¹)	–	–	–	–	–	–	–	1.5	34.2

Data in this study (*Riptortus pedestris*) are expressed as mean ± SD ($n = 3$). “–” not reported. ^{a, b, c, d, e, f} cited from Feng et al. (2000), Ma (2012), Li and Li (2010), Musundire et al. (2016), Ramos-Elorduy et al. (1997), and Yang (2018), respectively.

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Table S2. Amino acid content of *R. pedestris* powder and some edible stinkbugs (g 100g⁻¹)

Amino acid	<i>Riptortus pedestris</i>	<i>Sphaerodoma rustica</i> ^a	<i>Mictis ebrosa</i> ^a	<i>Euschnes saevus</i> ^a	<i>Cyclopelta parva</i> ^a	<i>Tessara-toma papillosa</i> ^a	<i>Halymorphia picus</i> ^b	<i>Dolycoris baccarum</i> ^b	<i>Urochela luteovariorum</i> ^b	<i>Aspongopus chinensis</i> ^c	<i>Encostomum del-egorguei</i> ^d	<i>Pachilis gigas</i> ^e	<i>Euschistus Edessa egglestoni</i> ^e
Isoleucine	1.14	2.25	3.13	1.85	1.81	1.69	1.58	1.82	1.50	1.00	0.96	2.65	1.54
Leucine	5.69	3.81	3.53	2.95	2.55	2.63	3.22	3.50	2.80	4.20	2.14	4.35	2.45
Lysine	3.41	3.83	4.37	3.04	2.39	3.06	2.54	2.67	1.80	1.50	0.27	2.84	1.05
Methionine	1.42	0.77	0.70	0.61	0.51	0.20	4.20	3.30	3.99	0.91	0.33	2.27	0.98
Cysteine	1.21	0.97	0.87	0.63	2.30	1.05	0.67	0.79	0.63	–	–	1.51	0.35
Phenylalanine	3.41	1.49	2.09	1.13	1.61	1.71	1.66	1.84	1.64	1.87	0.63	9.07	1.16
Tyrosine	3.41	2.55	2.48	2.02	1.84	2.11	2.63	2.65	2.53	5.48	1.92	3.65	1.68
Threonine	2.38	2.57	2.83	3.40	1.69	1.26	1.90	2.03	1.78	1.09	0.13	2.27	1.68
Tryptophan	1.35	2.25	2.08	1.15	–	0.54	–	–	–	0.10	1.02	0.38	0.21
Valine	6.26	3.80	3.46	2.54	1.89	2.11	2.90	2.89	2.55	2.14	0.29	3.91	2.14
Histidine	2.27	4.79	2.31	2.19	0.80	1.73	1.54	1.53	1.15	0.97	–	1.26	1.12
Aspartic acid	5.97	4.69	3.14	3.56	3.19	2.70	3.52	3.88	3.32	2.64	–	4.16	2.49
Serine	4.27	1.93	2.95	4.23	2.04	1.91	2.49	2.74	2.45	1.73	–	2.84	1.37
Glutamic acid	7.96	6.22	5.97	7.48	3.98	2.80	4.90	5.77	4.80	3.25	–	6.49	3.36
Proline	7.75	3.13	2.87	2.24	1.04	1.80	2.65	2.66	2.53	0.25	0.73	3.59	2.35
Glycine	7.18	3.61	2.94	1.60	1.81	1.78	2.72	2.73	2.29	1.79	–	4.41	2.1
Alanine	7.75	6.80	3.63	2.91	2.79	2.33	3.96	3.85	3.32	3.28	–	4.85	3.26
Arginine	3.34	4.26	4.37	1.67	1.63	2.10	2.73	2.73	2.24	1.23	0.91	2.58	1.51
Total of amino acid	76.17	59.72	53.72	45.2	33.87	33.51	45.81	47.38	41.32	33.43	8.37	63.08	30.8
Total of essential amino acids	29.68	24.29	25.54	19.32	–	16.36	–	–	–	–	–	32.90	13.24
Total of non-essential amino acids	44.22	30.64	25.87	23.69	–	15.42	–	–	–	–	–	28.92	16.44
EEA/TAA	0.39	0.41	0.48	0.43	–	0.49	–	–	–	–	–	52.17	43.04
EEA/NEAA	0.67	0.79	0.99	0.82	–	1.06	–	–	–	–	–	113.76	80.54

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