

Supplementary Material

Table S1. Proximate Composition of common edible insects reported in literature (% dwb).

Insect species	Moisture (%)	Protein (%)	Fat (%)	Ash (%)
<i>T. molitor</i> (L.) ¹	62.9	51.9	31.1	4.3
<i>T. molitor</i> (L.) ²	61.0	47.2	43.1	3.1
<i>T. molitor</i> (L.) ²	61.9	49.1	35.2	2.4
<i>T. molitor</i> (L.) ³	64.8	49.4	38.1	2.8
<i>T. molitor</i> (L.) ⁴	-	47.7	37.7	3.0
Average <i>T. molitor</i> (L.)	62.7	49.1	37.0	3.1
<i>T. molitor</i> (A.) ²	63.7	65.3	14.9	3.3
<i>T. molitor</i> (A.) ⁴	-	60.2	20.8	2.7
Average <i>T. molitor</i> (A.)	63.7	62.8	17.9	3.0
<i>A. domesticus</i> (A.) ⁵	67.7	47.1	25.8	3.8
<i>A. domesticus</i> (A.) ¹	73.2	64.4	22.8	5.1
<i>A. domesticus</i> (A.) ²	69.2	66.6	22.1	3.6
<i>A. domesticus</i> (A.) ³	68.2	70.8	18.6	5.0
Average <i>A. domesticus</i> (A.)	69.6	62.2	22.3	4.4
BSFL (on middling diet) ⁶	69.8	37.2	30.8	13.5
BSFL (on barley diet) ⁷	-	49.1	33.2	8.3
BSFL (on malted barley diet) ⁷	-	52.4	21.1	9.7
BSFL (on malted corn diet) ⁷	-	53.3	25.5	10.0
BSFL (on sorghum & barley diet) ⁷	-	52.9	29.7	10.6
BSFL (fed on chicken manure) ⁸	-	53.9	30.1	9.3
BSFL (fed on kitchen waste) ⁸	-	43.3	34.3	9.6
BSFL (fed on spent grain) ⁸	-	54.3	31.0	11.6
Average BSFL	69.8	49.6	29.5	10.3

L. = larvae; A. = adult; BSFL = black soldier fly larvae=*H. illucenes*; Sources:²⁷ Barker et al., 1998; ⁷⁴ Finke, 2002; ²⁴ Finke, 2007; ⁷⁵ Ramos-Elorduy et al., 2002; ⁷⁶ Ayieko et al., 2016; ²³ Tschirner and Simon, 2015; ² Chia et al., 2020; ⁷⁷ Shumo et al., 2019

Table S2. Mineral Composition of common edible insects reported in literature (mg/kg, dwb).

Insect species	Ca	K	P	Mg	Na	Fe	Mn	Cu	Zn
<i>T. molitor</i> (L.) ¹	1,200	-	14,200	2,800	-	39.7	6.8	17.8	131
<i>T. molitor</i> (L.) ²	472.0	7,615	6,974	2,215	1,254	55.1	9.2	16.4	114
<i>T. molitor</i> (L.) ²	444	8,950	7,480	2,102	1,409	54.1	13.7	16.0	137
Average <i>T. molitor</i> (L.)	705	8,283	9,551	2,372	1,332	49.6	9.9	16.7	127
<i>T. molitor</i> (A.) ²	636	9,366	7,630	1,669	1,741	60.1	11.0	20.7	127
Average <i>T. molitor</i> (A.)	636	9,366	7,630	1,669	1,741	60.1	11.0	20.7	127
<i>A. domesticus</i> (A.) ³	3,147	9,798	331	-	8,502	51.8	58.7	29.4	-
<i>A. domesticus</i> (A.) ¹	2,100	-	7,800	800	-	112	29.7	8.5	186
<i>A. domesticus</i> (A.) ²	1,321	11,266	9,578	1,094	4,351	62.7	37.3	20.1	218
Average <i>A. domesticus</i> (A.)	2,189	10,532	5,903	947	6,427	75.6	41.9	19.3	202
BSFL (on middling diet) ⁴	39,350	12,190	8,910	3,590	910.0	630	730	34.3	270
BSFL (on barley diet) ⁵	20,730	8,200	10,530	3,070	1,180	240	250	16.0	190
BSFL (on malted barley diet) ⁵	24,200	9,770	11,730	3,400	1,320	210	220	15.0	171
BSFL (on malted corn diet) ⁵	23,730	9,530	11,700	3,400	1,250	200	210	14.0	200

BSFL (on sorghum & barley diet) ⁵	28,070	9,800	12,370	3,480	1,180	250	260	11.0	130
BSFL (fed on chicken manure) ⁶	3,200	4,900	3,900	4,000	2,400	600	1,400	400	300
BSFL (fed on kitchen waste) ⁶	2,000	5,700	4,100	3,300	2,000	2,200	900	200	300
BSFL (fed on spent grain) ⁶	1,700	4,400	4,600	3,500	2,600	300	1,100	500	300
Average BSFL	17,873	8,061	8,480	3,468	1,605	579	634	149	233

L. = larvae; A. = adult; BSFL = black soldier fly larvae=*H. illucenes*; Sources: ²⁷Barker et al., 1998; ⁷⁴Finke, 2002; ⁷⁶Ayieko et al., 2016; ²³Tschirner and Simon, 2015; ²Chia et al., 2020; ⁷⁷Shumo et al., 2019