animals

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Supplementary Material

Mechanical Processing of *Hermetia illucens* Larvae and *Bombyx mori* Pupae Produces Oils with Antimicrobial Activity

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Figure S1. A) BSFL meal sedimentation; **B)** Surfacing of meal lipids.

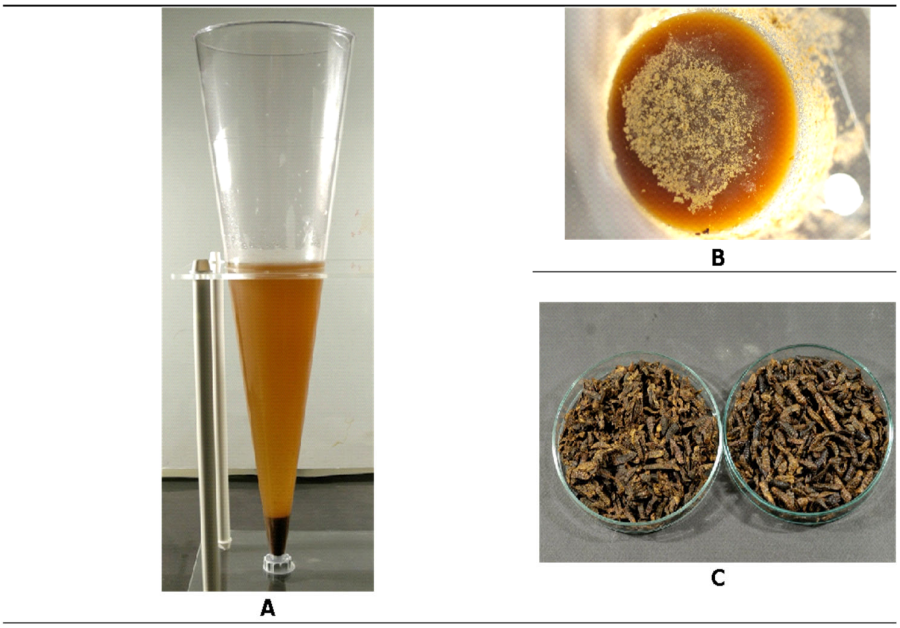

Figure S2. A) BSF whole larvae sedimentation; **B)** Surfacing of larvae lipids; **C**) Larvae before (left) and after (right) treatment

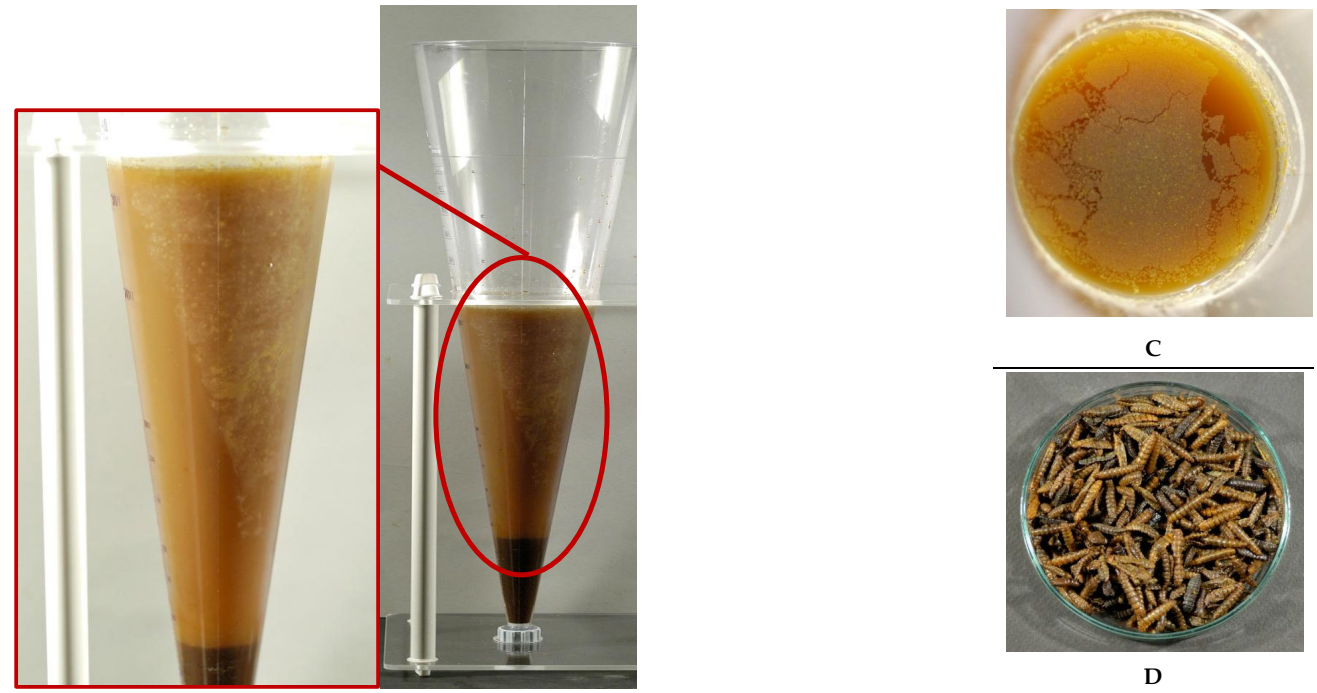

Figure S3. A–B) BSF larvae sedimentation and solidified lipids distributed in almost all the water amount; **C)** Surfacing of larvae lipids; **D)** Larvae after 1 h extraction with water at 100 °C.

Figure S4. A) Mechanical pressing of *H. illucens* larvae; **B)** mechanical pressing of *B. mori* pupae.

Table S1. Fatty acids contained in BSF non-defatted meal and oil.

Fatty Acids	Notation	Non-defatted Meal	Extracted Oil
		Mean ± SD	Mean ± SD
Caproic	C6:0	0.02 ± 0.01	0.01 ± 0.00
Enanthic	C7:0	0.02 ± 0.00	0.01 ± 0.00
Caprylic	C8:0	0.03 ± 0.01	0.02 ± 0.00
Pelargonic	C9:0	0.05 ± 0.01	0.04 ± 0.00
Capric	C10:0	0.83 ± 0.00	0.89 ± 0.00
Undecanoic	C11:0	0.03 ± 0.00	0.03 ± 0.00
Undecenoic	C11:1	0.03 ± 0.00	0.03 ± 0.00
Dodecanoic, anteiso	C12:0 anteiso	0.03 ± 0.01	0.00 ± 0.00
Lauric	C12:0	38.31 ± 0.00	42.45 ± 0.09
Dodecenoic, cis	C12:1c	0.06 ± 0.00	0.08 ± 0.00
Dodecenoic, trans	C12:1t	0.05 ± 0.00	0.06 ± 0.00
Tridecanoic, iso	C13:0 iso	0.03 ± 0.00	0.03 ± 0.00
Tridecanoic, anteiso	C13:0 anteiso	0.05 ± 0.00	0.05 ± 0.00
Tridecanoic	C13:0	0.05 ± 0.00	0.04 ± 0.00
Tetrodecanoic, iso	C14:0 iso	0.08 ± 0.01	0.06 ± 0.00
Myristic	C14:0	7.94 ± 0.00	8.23 ± 0.01
Tetradecenoic, trans	C14:1t	0.08 ± 0.00	0.07 ± 0.00
Tetradecenoic, n-7	C14:1n7	0.05 ± 0.02	0.04 ± 0.00
Tetradecenoic, n-5	C14:1n5	0.27 ± 0.00	0.30 ± 0.00
Pentadecanoic, iso	C15:0 iso	0.11 ± 0.01	0.08 ± 0.00
Pentadecanoic, anteiso	C15:0 anteiso	0.2 ± 0.01	0.15 ± 0.00
Pentadecanoic	C15:0	0.33 ± 0.00	0.28 ± 0.00
Pentadecenoic, trans	C15:1t	0.12 ± 0.03	0.11 ± 0.01
Esadecanoic iso	C16:0 iso	0.12 ± 0.01	0.09 ± 0.00
Palmitic	C16:0	16.93 ± 0.03	15.35 ± 0.03
Hexadecenoic, n-9	C16:1n9	0.37 ± 0.00	0.32 ± 0.00
Hexadecenoic, n-7	C16:1n7	4.17 ± 0.01	4.02 ± 0.01
Hexadecenoic, trans	C16:1t	0.02 ± 0.01	0.02 ± 0.00
Heptadecanoic, iso	C17:0 iso	0.09 ± 0.01	0.08 ± 0.00
Heptadecanoic, anteiso	C17:0 anteiso	0.13 ± 0.00	0.10 ± 0.00
Heptadecanoic	C17:0	0.36 ± 0.01	0.32 ± 0.00
Heptadecenoic, n-7	C17:1n7	0.33 ± 0.03	0.28 ± 0.01
Heptadecenoic, trans	C17:1t	0.06 ± 0.01	0.05 ± 0.00
Hexadecadienoic	C16:2	0.06 ± 0.00	0.06 ± 0.01
Stearic	C18:0	3.31 ± 0.00	2.95 ± 0.01
Oleic	C18:1n9	15.14 ± 0.02	13.53 ± 0.03
Octadecenoic, n-7	C18:1n7c	0.83 ± 0.01	0.78 ± 0.01

Linoleic	C18:2n6 linoleic	6.02 ± 0.01	5.3 ± 0.00
Nonadecanoic	C19:0	0.02 ± 0.00	0.02 ± 0.00
a-Linolenic	C18:3n3	0.79 ± 0.00	0.8 ± 0.03
Conjugated linoleic 9c, 11t	CLA c9t11	1.38 ± 0.01	1.51 ± 0.01
Conjugated others	CLA	0.03 ± 0.00	0.02 ± 0.01
Conjugated linoleic trans, trans	CLAtt	0.03 ± 0.00	0.04 ± 0.00
Arachidic	C20:0	0.09 ± 0.01	0.09 ± 0.02
Octadecatetraenoic	C18:4n4	0.3 ± 0.01	0.36 ± 0.00
Eicosenoic	C20:1n9	0.07 ± 0.01	0.07 ± 0.00
Eicosadenioic	C20:2n6	0.04 ± 0.01	0.04 ± 0.00
Eicosatrienoic	C20:3n6	0.39 ± 0.00	0.63 ± 0.17
Arachidonic	C20:4n6	0.07 ± 0.00	0.05 ± 0.01
Eicosapentaenoic	C20:5n3 EPA	0.04 ± 0.01	0.05 ± 0.01
Behenic	C22:0	0.05 ± 0.02	0.04 ± 0.00
SFA/UFA ratio		2.25	2.49
ω6/ω3 ratio		5.76	4.95

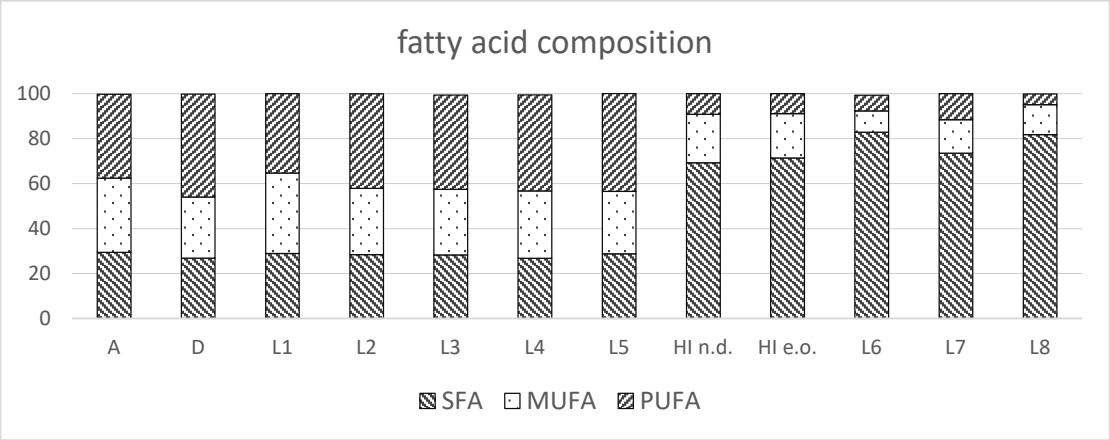

Figure S5: Fatty acid (SFA, MUFA, PUFA) composition of silkworm oil and BSFL oil compared to available literature. A = experimental thesis A (see Table 4); D = experimental thesis (see Table 4). L1 [50]; L2, L3 [51]; L4 [52]; L5 [53], Hi n.d. = *H. illucens* non-defatted meal (see Table 3); Hi e.o. = *H. illucens* extracted oil (see Table 3); L6 [19]; L7 [54]; L8 [55].