

SUPPLEMENTARY MATERIAL

Table S1. Median values for the individual fatty acids identified and quantified by internal normalization (peak area percentage) according to the type of by-product and the botanical origin.

By-product	Botanical origin	C6:0	C8:0	C10:0	C12:0	C14:0	C16:0	C16:1 n-9	C16:1 n-7	C17:0	C18:0	C18:1 <i>trans</i>	C18:1 n-9	C18:1 n-7	C18:2 n-6	C20:0	C18:3 n-3	C20:1 n-9	C20:2 n-6	C22:0	C22:2	C24:0
Acid oils (AO, <i>n</i> = 79)	SCP	0.00 ^a	0.01 ^a	0.01 ^a	0.02 ^{bc}	0.15 ^c	21.86 ^d	0.05 ^b	0.35 ^b	0.20 ^c	23.38 ^c	0.48 ^{ab}	37.26 ^c	0.96 ^a	12.67 ^b	0.98 ^c	0.90 ^a	0.18 ^a	0.00 ^{ab}	0.41 ^a	0.00	0.29 ^a
	SP	0.02 ^b	0.09 ^c	0.04 ^c	0.25 ^d	0.38 ^c	18.25 ^c	0.05 ^{ab}	0.17 ^a	0.10 ^{ab}	5.34 ^{ab}	0.31 ^{ab}	43.94 ^c	1.24 ^b	24.87 ^c	0.45 ^a	1.77 ^b	0.28 ^b	0.00 ^a	0.47 ^b	0.00	0.31 ^{ab}
	O	0.01 ^b	0.02 ^{bc}	0.01 ^b	0.01 ^a	0.06 ^a	13.20 ^b	0.13 ^c	0.75 ^c	0.11 ^b	3.63 ^a	1.66 ^c	64.14 ^d	1.95 ^c	10.83 ^a	0.56 ^a	1.05 ^{ab}	0.32 ^c	0.09 ^b	0.40 ^a	0.00	0.55 ^c
	BS	0.00 ^{ab}	0.03 ^{bc}	0.02 ^{bc}	0.02 ^d	0.10 ^b	13.06 ^{ab}	0.06 ^b	0.16 ^a	0.09 ^a	3.41 ^{ab}	0.66 ^{abc}	33.24 ^{bc}	1.04 ^{ab}	45.81 ^d	0.54 ^a	0.90 ^{ab}	0.24 ^b	0.00 ^{ab}	0.66 ^{bc}	0.00	0.42 ^{bc}
	SU	0.07 ^b	0.03 ^c	0.02 ^c	0.03 ^{cd}	0.12 ^b	9.81 ^a	0.07 ^b	0.19 ^a	0.09 ^a	3.87 ^{ab}	1.01 ^{bc}	31.66 ^b	1.20 ^b	46.14 ^d	0.79 ^b	1.26 ^b	0.25 ^b	0.00 ^{ab}	0.93 ^d	0.00	0.50 ^c
	SU-SO	0.00 ^{ab}	0.02 ^{bc}	0.01 ^{ab}	0.01 ^{ab}	0.11 ^b	11.44 ^a	0.03 ^a	0.12 ^a	0.10 ^{ab}	4.07 ^b	0.44 ^a	22.36 ^a	1.14 ^b	52.70 ^e	0.54 ^a	1.99 ^b	0.19 ^a	0.00 ^a	0.80 ^{cd}	0.00	0.44 ^{bc}
	SO	0.00 ^{ab}	0.01 ^{ab}	0.01 ^{ab}	0.01 ^a	0.10 ^b	11.51 ^{ab}	0.03 ^a	0.11 ^a	0.09 ^{ab}	4.09 ^{ab}	0.55 ^{ab}	25.17 ^a	1.24 ^{ab}	51.79 ^e	0.68 ^{ab}	2.83 ^b	0.19 ^{ab}	0.01 ^{ab}	0.93 ^{cd}	0.00	0.45 ^{bc}
<i>p</i> values ¹		0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.021	0.000	0.006	0.000	0.108	0.000
Fatty acid distillates (FAD, <i>n</i> = 13)	LFAD	0.53 ^b	6.60 ^b	5.55 ^c	33.50 ^c	18.25 ^c	15.92 ^a	0.01 ^a	0.06 ^a	0.03 ^a	4.58	0.15	9.58 ^a	0.18 ^a	2.52 ^a	0.11 ^a	0.08 ^a	0.05 ^a	0.00	0.03 ^a	0.00	0.02 ^a
	PFAD	0.00 ^a	0.03 ^a	0.02 ^b	0.22 ^b	1.16 ^b	46.31 ^b	0.03 ^b	0.16 ^b	0.11 ^b	4.53	0.21	35.98 ^b	0.64 ^b	8.93 ^b	0.34 ^b	0.35 ^b	0.13 ^b	0.01	0.06 ^a	0.00	0.04 ^{ab}
	OFAD	0.00 ^a	0.01 ^a	0.00 ^a	0.01 ^a	0.05 ^a	11.78 ^a	0.14 ^c	1.31 ^c	0.07 ^a	1.86	0.22	69.75 ^c	2.83 ^c	10.13 ^c	0.29 ^{ab}	0.95 ^c	0.29 ^c	0.09	0.10 ^b	0.00	0.05 ^b
<i>p</i> values ²		0.004	0.008	0.006	0.006	0.006	0.008	0.006	0.006	0.006	0.094	0.493	0.006	0.006	0.006	0.011	0.006	0.006	0.056	0.036	1.000	0.049
AO (<i>n</i> = 79)		0.00	0.02 ^a	0.01 ^a	0.02 ^a	0.11 ^a	13.05 ^a	0.05 ^b	0.30 ^b	0.10	3.88	0.66 ^b	36.57	1.16 ^b	36.83 ^b	0.59 ^b	1.05 ^b	0.23 ^b	0.00	0.55 ^b	0.00	0.45 ^b
FAD (<i>n</i> = 13)		0.00	0.03 ^b	0.03 ^b	0.29 ^b	1.21 ^b	18.90 ^b	0.03 ^a	0.16 ^a	0.08	4.50	0.21 ^a	35.68	0.61 ^a	8.49 ^a	0.27 ^a	0.34 ^a	0.12 ^a	0.01	0.04 ^a	0.00	0.03 ^a
<i>p</i> values ³		0.433	0.029	0.001	0.000	0.000	0.001	0.001	0.008	0.079	0.594	0.000	0.173	0.000	0.000	0.000	0.000	0.000	0.388	0.000	0.477	0.000

Abbreviations: SCP, blends of AO from seed oils, cocoa butter and palm oil; SP, blends of AO from seed and palm oils; O, AO from olive pomace oil and blends of AO from olive pomace and olive oils; BS, blends of AO from seed oils; SU, AO from sunflower oil; SU-SO, blends of AO from sunflower and soybean oils; SO, AO from soybean oil; LFAD, FAD from coconut oil and blends of FAD from coconut and palm kernel oils; PFAD, FAD from palm oil; OFAD, FAD from olive pomace and olive oils. ¹ *p* values were obtained from Kruskal-Wallis U test. Stepwise Multiple Comparisons for independent samples were used to compare medians between botanical origin groups within acid oils (AO, *n* = 79). AO groups bearing different letters (a-d) were significantly different ($p \leq 0.05$). ² *p* values were obtained from Kruskal-Wallis U test. Stepwise Multiple Comparisons for independent samples were used to compare medians between botanical origin groups within fatty acid distillates (FAD, *n* = 13). FAD groups bearing different letters (a-c) were significantly different ($p \leq 0.05$). ³ *p* values were obtained from Mann Whitney U test for independent samples to compare medians between AO and FAD (AO, *n* = 79; FAD, *n* = 13). Groups bearing different letters (a-b) were significantly different ($p \leq 0.05$).

Table S2. Mean, standard deviation, median, minimum and maximum values for the different sums of fatty acids identified and quantified by peak area normalization (%) according to the botanical origin of the acid oils (AO).

		SFA (%)	<i>trans</i> -C18:1	<i>cis</i> -MUFA (%)	n-6 PUFA (%)	n-3 PUFA (%)	UFA/SFA ratio
SCP	Mean \pm SD	46.4 \pm 3.04	0.6 \pm 0.32	39.2 \pm 1.59	12.9 \pm 1.40	0.9 \pm 0.16	2.7 \pm 1.72
	Median	47.2 ^d	0.5 ^{ab}	38.8 ^c	12.7 ^b	0.9 ^a	2.7
	Min	39.1	0.2	37.6	11.2	0.6	0.9
	Max	49.1	1.4	43.3	15.5	1.0	4.5
SP	Mean \pm SD	29.8 \pm 6.36	0.6 \pm 0.61	43.8 \pm 3.27	24 \pm 4.79	1.9 \pm 1.02	2.5 \pm 1.31
	Median	27.3 ^c	0.3 ^{ab}	45.5 ^c	24.9 ^c	1.8 ^b	2.4
	Min	22.8	0.1	39.1	18.4	0.7	1.0
	Max	39.2	1.4	46.7	30.8	3.3	4.1
O	Mean \pm SD	18.8 \pm 0.66	1.6 \pm 0.89	67.3 \pm 1.13	11.3 \pm 1.00	1 \pm 0.09	4.3 \pm 1.31
	Median	18.6 ^b	1.7 ^c	67.4 ^d	10.9 ^a	1.1 ^{ab}	4.7
	Min	18.1	0.3	65.5	10.2	0.8	0.9
	Max	20.2	2.9	69.5	14.2	1.2	5.5
BS	Mean \pm SD	17.7 \pm 2.68	0.9 \pm 0.54	39.3 \pm 10.36	41.1 \pm 11.83	1 \pm 0.42	3.3 \pm 1.88
	Median	18.2 ^{ab}	0.7 ^{abc}	34.9 ^{bc}	45.8 ^d	0.9 ^{ab}	4.1
	Min	14.2	0.2	30.1	18.9	0.4	1.1
	Max	22.5	1.6	59.5	53.2	1.6	6.1
SU	Mean \pm SD	17.2 \pm 1.23	1.2 \pm 0.98	35 \pm 6.98	45 \pm 7.12	1.6 \pm 1.05	3.9 \pm 1.61
	Median	17.1 ^a	1 ^{bc}	33.4 ^b	46.2 ^d	1.3 ^b	4.4
	Min	15.0	0.1	26.7	24.7	0.4	0.2
	Max	19.2	4.5	55.8	54.5	3.7	5.5
SU-SO	Mean \pm SD	17.9 \pm 1.39	0.4 \pm 0.36	27.7 \pm 5.45	51.9 \pm 5.27	2.2 \pm 1.31	3 \pm 2.27
	Median	17.6 ^{ab}	0.4 ^a	23.4 ^a	52.7 ^e	2.0 ^b	3.6
	Min	16.0	0.1	22.7	41.6	0.2	0.1
	Max	20.9	1.1	37.6	59.2	4.0	5.9
SO	Mean \pm SD	18.1 \pm 2.56	0.6 \pm 0.73	26.7 \pm 5.21	51.8 \pm 0.12	2.8 \pm 3.51	5 \pm 0.00
	Median	18.1 ^{ab}	0.6 ^{ab}	26.7 ^a	51.8 ^e	2.8 ^{ab}	5.00
	Min	16.3	0.0	23.1	51.7	0.4	5.00
	Max	19.9	1.1	30.4	51.9	5.3	5.00
<i>p</i> values ¹		<0.001	0.001	<0.001	<0.001	0.021	0.057

Abbreviations: SCP, blends of AO from seed oils, cocoa butter and palm oil; SP, blends of AO from seed and palm oils; O, AO from olive pomace oil and blends of AO from olive pomace and olive oils; BS, blends of AO from seed oils; SU, AO from sunflower oil; SU-SO, blends of AO from sunflower and soybean oils; SO, AO from soybean oil; SFA, saturated fatty acids; *cis*-MUFA, *cis*-mono-unsaturated fatty acids; *cis*-PUFA, *cis*-polyunsaturated fatty acids; UFA/SFA ratio, unsaturated/saturated ratio. ¹ *p* values were obtained from Kruskal-Wallis U test. Stepwise Multiple Comparisons for independent samples were used to compare medians between botanical origin groups within acid oils (AO, *n* = 79). AO groups bearing different letters (a-d) were significantly different (*p* \leq 0.05).

Table S3. Mean, standard deviation, median, minimum and maximum values for the different sums of fatty acids identified and quantified by peak area normalization (%) according to the botanical origin of the fatty acid distillates (FAD).

		SFA (%)	<i>trans</i> -C18:1	<i>cis</i> -MUFA (%)	n-6 PUFA (%)	n-3 PUFA (%)	UFA/SFA ratio
LFAD	Mean \pm SD	86.3 \pm 1.4	0.2 \pm 0.16	10.8 \pm 1.57	2.6 \pm 0.24	0.1 \pm 0.02	3.9 \pm 3.40
	Median	87.1 ^c	0.1	9.9 ^a	2.5 ^a	0.1 ^a	4.7
	Min	84.3	0.1	9.6	2.3	0.0	0.2
	Max	87.6	0.5	13.2	2.9	0.1	6.8
PFAD	Mean \pm SD	53 \pm 1.78	0.2 \pm 0.07	37.6 \pm 1.84	8.9 \pm 0.31	0.3 \pm 0.02	4.1 \pm 0.55
	Median	53.4 ^b	0.2	37 ^b	8.9 ^b	0.3 ^b	4.2
	Min	50.0	0.2	35.9	8.5	0.3	3.4
	Max	55.1	0.3	41.0	9.3	0.4	4.6
OFAD	Mean \pm SD	14.3 \pm 2.14	0.2 \pm 0.01	74.3 \pm 3.44	10.2 \pm 0.89	0.9 \pm 0.39	2.6 \pm 2.42
	Median	14.3 ^a	0.2	74.3 ^c	10.2 ^c	0.9 ^c	2.6
	Min	12.8	0.2	71.9	9.6	0.7	0.9
	Max	15.8	0.2	76.8	10.9	1.2	4.3
<i>p</i> values ¹		0.006	0.493	0.006	0.006	0.006	0.607

Abbreviations: LFAD, FAD from coconut oil and blends of FAD from coconut and palm kernel oils; PFAD, FAD from palm oil; OFAD, FAD from olive pomace and olive oils; SFA, saturated fatty acids; *cis*-MUFA, *cis*-monounsaturated fatty acids; *cis*-PUFA, *cis*-polyunsaturated fatty acids. ¹ *p* values were obtained from Kruskal-Wallis U test. Stepwise Multiple Comparisons for independent samples were used to compare medians between botanical origin groups within fatty acid distillates (FAD, *n* = 13). AO groups bearing different letters (a-c) were significantly different (*p* \leq 0.05).