

Table S1. Values of limit of detection (LOD) and limit of quantitation (LOQ) of detected minerals.

	LOD [mg/kg]	LOQ [mg/kg]	LOD [ug/L]	LOQ [ug/L]
macroelements				
K	2.216	2.244	8.36	8.49
Mg	0.513	0.525	0.92	0.93
Na	11.353	11.537	8.95	9.16
Ca	1.812	1.829	8.72	8.84
microelements				
Fe	0.827	0.858	0.76	0.85
Zn	0.276	0.278	1.90	1.92
Cu	0.243	0.246	1.67	1.68
Mn	0.008	0.009	0.00	0.00
Se	0.014	0.023	0.83	0.85
Co	0.001	0.001	0.08	0.08
Cr	0.067	0.068	0.52	0.52
Ni	0.027	0.028	0.37	0.37
Al	11.285	11.368	12.20	12.20
Sr	0.020	0.021	0.73	0.74
Pb	0.045	0.046	0.62	0.63
Cd	0.001	0.001	0.10	0.10
B	0.311	0.328	5.27	5.36
Tl	0.003	0.004	0.39	0.39

Table S2. Chemical characteristic of dietary supplements.

Fatty acid [μg/g]	BME	PSO
C6:0	nd	7.63
C8:0	nd	10.55
C10:0	nd	4.05
C12:0	0.12	11.63
C14:0	0.41	50.9
C15:0	0.16	26.2
<i>cis</i> 7 C15:1	nd	5.85
C16:0	2.42	6555
<i>cis</i> 7 C16:1	0.34	26.3
<i>cis</i> 9 C16:1	nd	8.31
C17:0	0.15	155
<i>cis</i> 6C17:1	nd	nd
<i>cis</i> 9C17:1	nd	8.77
C18:0	6.58	6483
<i>trans</i> 11C18:1	nd	24.7
<i>cis</i> 9 C18:1	0.58	12170
<i>cis</i> 11 C18:1	nd	833
<i>cis</i> 14 C18:1	nd	7.73
<i>cis</i> 9 <i>cis</i> 12 C18:2 (LA)	nd	16748
<i>cis</i> 6 <i>cis</i> 9 <i>cis</i> 12 C18:3 (GLA)	nd	23.5
<i>cis</i> 8 <i>cis</i> 11 <i>cis</i> 14 C18:3 n-4	nd	nd
<i>cis</i> 9 <i>cis</i> 12 <i>cis</i> 15 C18:3 (ALA)	0.42	1466

C20:0	0.12	1003
<i>cis</i> 11C20:1	nd	nd
C21:0	nd	60
C22:0	nd	250
C24:0	nd	100
Σ CLnA:	0.00	111000
<i>cis</i> 9 <i>trans</i> 11 <i>cis</i> 13 C18:3 (PA)	nd	45414
<i>cis</i> 9 <i>trans</i> 11 <i>trans</i> 13 C18:3 (αESA)	nd	16280
Conjugated fatty acids:		
ΣCFA:	2.00	723481
ΣCD:	0.23	nd
<i>tt</i> isomers	0.23	nd
<i>ct/tc</i> isomers	nd	nd
<i>cc</i> isomers	nd	nd
ΣCT:	1.77	723481
<i>ttt</i> isomers	1.58	546525
<i>ttc</i> isomers	0.11	68660
<i>cct</i> isomers	0.07	108296
	BME 1% aqueous extract	BME 10% methanolic extract
Compound [mg/100g dw.]:		
Chlorogenic acid	6.33	956
Caffeic acid	nd	26.0
Sinapic acid	nd	58.5
Isochlorogenic acid	nd	87.6
Rutin	tr	tr
Protocatechuic acid	nd	tr
Luteolin	nd	tr
Kaempferol	nd	tr
Epigallocatechin	nd	tr
Quercetin	nd	tr
Quercitrin	nd	tr
Total polyphenol content [g/l]	640	1489
DPPH [μmol Trolox/l]	290	851
FRAP [μmol Fe2+/ l]	654	154
	PSO	
IV [mgI ₂ /100g oil]	120	
PV [mEq O/kg oil]	5.74	
AV [mg KOH/g oil]	6.94	

*cis*9*cis*12 C18:2 – linoleic acid (LA); *cis*6*cis*9*cis*12 C18:3 – γ-linolenic acid (GLA); *cis*9*cis*12*cis*15 C18:3 – α-linolenic acid (ALA); *cis*9*trans*11*cis*13 C18:3 – unctic acid (PA); *cis*9*trans*11*trans*13 C18:3 – α-eleostearic acid (αESA); CFA – conjugated fatty acids, CD – conjugated dienes, CT – conjugated trienes, cc – *cis,cis* isomers, *ct/tc* – *cis,trans/ trans,cis* isomers, *tt* – *trans,trans* isomers, *ttt* – *trans,trans,trans* isomers, *ttc* – *trans,trans,cis* isomers, *cct* – *cis,cis,trans* isomers, AV - acidic value; DPPH - 1,1-diphenyl-2-picrylhydrazyl; FRAP - ferric reducing antioxidant power; IV - iodine value; PV - peroxide value; 0.00 – amount was below the quantification limit (<LOQ); nd – not detected; tr – trace amount.