

**Table S1.** Fatty acid composition of oils (% of total fatty acids).

Fatty Acid	Oil Type				
	EVOO	C PRO	OO	RO	SO
C8:0	ND	ND	ND	ND	ND
C10:0	ND	ND	ND	ND	ND
C12:0	ND	ND	ND	ND	ND
C14:0	ND	ND	ND	ND	ND
C16:0	1.10 (0.16)	ND	0.88 (0.01)	0.20 (0.01)	ND
C18:0	13.16 (0.47)	4.88 (0.03)	12.40 (0.02)	4.79 (0.02)	6.52 (0.13)
C18:1	77.69 (1.43)	74.39 (0.10)	79.73 (0.08)	74.11 (0.10)	31.95 (1.75)
C18:2	8.04 (0.86)	20.73 (0.11)	6.98 (0.08)	20.57 (0.10)	61.53 (1.63)
C18:3	ND	ND	ND	0.33 (0.01)	ND
SFA%	14.26 (0.59)	4.88 (0.03)	13.28 (0.02)	4.79 (0.02)	6.52 (0.13)
MUFA%	77.69 (1.43)	73.39 (0.10)	79.73 (0.08)	74.11 (0.10)	31.95 (1.75)
PUFA%	8.04 (0.86)	20.73 (0.11)	6.98 (0.08)	20.90 (0.09)	61.53 (1.63)
Total	100.00	100.00	100.00	100.00	100.00

Indicated values are reported as means (standard deviation). ND—not detectable.

**Table S2.** Colour of vegetable oils: extra virgin olive oil (EVOO), cold-pressed rapeseed oil (C PRO), olive oil (OO), rapeseed oil (RO), sunflower oil (SO).

Oils	L*	a*	b*
EVOO	55.46 <sup>c</sup> (2.74)	-9.52 <sup>e</sup> (0.20)	69.00 <sup>b</sup> (4.07)
C PRO	58.90 <sup>b</sup> (0.55)	-7.46 <sup>c</sup> (0.03)	76.61 <sup>a</sup> (2.52)
OO	62.54 <sup>a</sup> (0.25)	-8.76 <sup>d</sup> (0.20)	43.46 <sup>c</sup> (2.00)
RO	64.06 <sup>a</sup> (1.95)	-3.65 <sup>b</sup> (0.10)	10.47 <sup>d</sup> (0.30)
SO	63.59 <sup>a</sup> (1.47)	-2.33 <sup>a</sup> (0.02)	6.67 <sup>d</sup> (0.04)

Indicated values are reported as means (standard deviation). Values with the different superscript letters (within same column) are significantly different ( $p < 0.05$ ).

**Table S3.** Total phenolic content (TPC), free fatty acids (FFA), radical scavenging activity and thiobarbituric acid reactive substances (TBARS) of vegetable oils. Extra virgin olive oil (EVOO), cold-pressed rapeseed oil (C PRO), olive oil (OO), rapeseed oil (RO), sunflower oil (SO).

Oils	TPC (mg GAE/kg Oil)	FFA (%) Oleic Acid	Radical Scavenging Activity (%)	TBARS (mmol/kg Oil)	Viscosity (mPa·s)	Density (g/mL)
EVOO	202.64 <sup>a</sup> (13.96)	0.312 <sup>a</sup> (0.073)	34.15 <sup>a</sup> (2.64)	0.158 <sup>c</sup> (0.007)	63.82 <sup>d</sup> (2.10)	0.9112 <sup>d</sup> (0.0002)
C PRO	50.43 <sup>c</sup> (11.71)	0.241 <sup>b</sup> (0.025)	3.97 <sup>b</sup> (0.23)	0.278 <sup>a</sup> (0.020)	58.45 <sup>b</sup> (2.90)	0.9143 <sup>b</sup> (0.0004)
OO	91.98 <sup>b</sup> (5.88)	0.221 <sup>b</sup> (0.012)	8.31 <sup>b</sup> (2.75)	0.200 <sup>b</sup> (0.013)	65.84 <sup>cd</sup> (1.60)	0.9122 <sup>cd</sup> (0.0016)
RO	85.14 <sup>b</sup> (11.71)	0.159 <sup>c</sup> (0.036)	31.79 <sup>a</sup> (3.46)	0.092 <sup>d</sup> (0.018)	57.72 <sup>bc</sup> (2.23)	0.9140 <sup>bc</sup> (0.0004)
SO	31.90 <sup>d</sup> (1.75)	0.153 <sup>c</sup> (0.023)	4.91 <sup>b</sup> (1.00)	0.011 <sup>e</sup> (0.002)	53.97 <sup>a</sup> (3.67)	0.9187 <sup>a</sup> (0.0013)

Indicated values are reported as means (standard deviation). Values with the different superscript letters (within same column) are significantly different ( $p < 0.05$ ).