Table 1. Analyses of Fatty acid methyl esters (FAMEs) by gas chromatography GC-FID of petroleum ether fraction of Tunisian *N. sativa* seeds and Aerial parts harvested at vegetative, flowering and fruiting stages

Percent of total fatty acids (%)	**NST**			
	Seeds	**Vegetative**	**Flowering**	**Fruiting**
Caprylic acid (c8)	-	0,09 ± 0,00 a	0,34 ± 0,11 b	0,52 ± 0,08 c
Myristic acid (14)	0,27 ± 0,01 a	1,02 ± 0,34 b	2,96 ± 0,14 c	7,33 ± 0,04 d
Palmitic acid (c16)	14,06 ± 0,84 a	23,64 ± 1,40 b	26,73 ± 1,11 c	57,92 ± 0,37 d
Palmitoleic acid (c16-1)	0,23 ± 0,01	-	-	-
Margaric acid (c17)	-	0,18 ± 0,02 a	0,70 ± 0,17 b	1,40 ± 0,01 c
Stearic acid (c18)	3,04 ± 0,21 a	5,03 ± 0,09 c	4,03 ± 0,14 b	9,18 ± 0,05 d
Oleic acid (c18-1n9)	20,70 ± 0,11c	20,39 ± 0,82 c	0,79 ± 0,04 a	4,07 ± 0,21 b
Linoleic acid (c18-2n6)	57,65 ± 0,91 d	38,51 ± 1,66 c	20,23 ± 0,45 b	2,89 ± 0,02 a
α-Linolenic acid (c18-3n3)	0,32 ± 0,01 a	5,56 ± 0,07 c	37,66 ± 1,91 d	2,77 ± 0,10 b
Arachidic acid (c20)	0,19 ± 0,01 a	0,87 ± 0,09 b	2,47 ± 0,03 c	5,36 ± 0,06 d
Eicosenoic acid (c20-1n9)	0,31 ± 0,01	-	-	-
Eicosadienoic acid (c20-2)	3,22 ± 0,06 b	3,20 ± 0,07 b	0 ± 0 a	0 ± 0 a
Behenic acid (c22)	-	1,05 ± 0,28 a	2,48 ± 0,07 b	5,42 ± 0,26 c
Lignoceric acid (c24)	-	0,45 ± 0,19a	1,61 ± 0,58b	3,13 ± 0,30c
ΣSFA	**17,56 ± 1,06 a**	**32,33 ± 2,37 b**	**41,33 ± 2,32 c**	**90,27 ± 0,24 d**
ΣUFA	**82,44 ± 1,06 d**	**67,67 ± 2,37 c**	**58,67 ± 2,32 b**	**9,73 ± 0,24 a**
DBI	**1,44 ± 0,02c**	**1,16 ± 0,03b**	**1,54 ± 0,07 d**	**0,18 ± 0,00a**
Total fatty acids	**100**	**100**	**100**	**100**

ΣSFA : saturated fatty acids; ΣUFA: unsaturated fatty acids. DBI : double bond index. Means are presented ± SD (n = 3). Means followed by the same letter are not significantly different at $P < 0.05$.

Table 2. Total phenolics (TPC), total flavonoids (TFC), flavonols and flavones (TFlC), and total proanthocyanidins (TPAC) (condensed tannins) contents in organic extracts of Tunisian *N. sativa* seeds and aerial parts harvested at vegetative, flowering and fruiting stages

Developmental stage	TPC (mg GAE/g DW)	TFC (mg QE/g DW)	TFlC (mg QE/g DW)	TPAC (mg CE/g DW)
Seeds				
PE	6.45 ± 0.28 ^{c}	0.40 ± 0.03 ^{a}	0.1 ± 0.01 ^{a}	3.63 ± 0.66 ^{b}
CH	3.26 ± 0.23 ^{b}	1.30 ± 0.39 ^{b}	0.15 ± 0.01 ^{b}	2.13 ± 0.14 ^{a}
M	1.86 ± 0.08 ^{a}	1.26 ± 0.26 ^{b}	0.16±0.02 ^{b}	1.96 ± 0.39 ^{a}
Vegetative				
PE	0.62 ± 0.04 ^{a}	0.11 ± 0.03 ^{a}	0.12 ± 0.01 ^{a}	0.53 ± 0.00 ^{a}
CH	0.94 ± 0.09 ^{a}	0.36 ± 0.08 ^{a}	0.24± 0.01 ^{a}	0.92 ± 0.22 ^{a}
M	3.98 ± 1.21 ^{b}	2.96 ± 0.89 ^{b}	1.40 ± 0.11 ^{b}	0.77 ± 0.20 ^{a}
Flowering				
PE	0.37 ± 0.01 ^{a}	0.33± 0.03 ^{a}	0.10 ± 0.01 ^{a}	0.55 ± 0.04 ^{a}
CH	0.61 ± 0.01 ^{a}	0.24 ± 0.04 ^{a}	0.15 ± 0.02 ^{a}	0.57 ± 0.08 ^{a}
M	5.89 ± 0.34 ^{b}	4.32 ± 1.66 ^{b}	2.12 ± 0.11 ^{b}	0.69 ± 0.20 ^{a}
Fruiting				
PE	0.18 ± 0.01 ^{a}	0.06 ± 0.02 ^{a}	0.21 ± 0.01 ^{a}	0.21 ± 0.02 ^{a}
CH	1.97 ± 0.16 ^{b}	1.58 ± 0.02 ^{b}	0.53 ± 0.11 ^{a}	2.08 ± 0.37 ^{c}
M	6.87 ± 1.37 ^{c}	5.68 ± 1.53 ^{c}	2.20 ± 0.34 ^{b}	0.83 ± 0.08 ^{b}

PE: petroleum ether; CH: chloroform; M: Methanol. Means are presented ± SD (n = 3).
Means followed by the same letter are not significantly different at $P < 0.05$

Table 3. Germination index (GI), expressed in % of control, and germination percentage (%) (G%) of *Lactuca sativa* in presence of organic extracts of Tunisian *N. sativa* seeds and aerial parts harvested at vegetative, flowering and fruiting stages.

		Developmental stage							
Extracts	**Cc mg/ml**	**Seeds**		**Vegetative**		**Flowering**		**Fruiting**	
		GI	G%	GI	G%	GI	G%	GI	G%
	Control	-	100a	-	100 b	-	100 a	-	100 d
Petroleum ether	1	100a	100a	100b	100b	100c	100a	100f	100d
	3	100a	100 a	100b	100b	100c	100a	96.67ef	98.33cd
	6	100a	100 a	98.33b	100b	100c	100a	**76.33c**	**85.66b**
Chloroform	1	100a	100 a	93.33ab	93.33ab	98.33c	100a	90d	90bc
	3	100a	100 a	92.22ab	93.33ab	94.17ab	96.67a	53.33b	55a
	6	100 a	100 a	**80a**	**83. 33a**	92.60a	96.67a	**44.17a**	**50a**
Methanol	1	98.33a	98.33a	100b	100b	99.44c	100a	98.89ef	100d
	3	97.78a	98.33a	97.78b	100b	97.78bc	100a	94.17def	98.33cd
	6	97.22a	98.33a	93.61b	96.67b	97.78bc	98.33a	93.33de	95cd

Means are presented ± SD (n = 3). Means followed in a column by the same letter are not significantly different at $P < 0.05$

Table 4. Phytotoxicity of aqueous extracts of Tunisian *N. sativa* seeds and aerial parts on lettuce germination and growth, assessed by Inhibition index (I) estimated fromWESIA (Whole-range Evaluation of the Strength of Inhibition in Allelopathic-bioassay).

Growth parameters	Extracts	Inhibition index (I)	Phytotoxicity	Growth parameters	Extracts	Inhibition index (I)	Phytotoxicity
GI %	Fruiting /CH	31.97	More toxic (+)	**Root length**	Vegetative / M	31.17	More toxic (+)
	Fruiting /PE	6.43			Flowering /M	24.33	
	Fruiting /M	3.63			Vegetative / PE	13.69	
	Flowering /CH	3.48			Fruiting / PE	13.54	
	Vegetative /CH	3.42			Fruiting /CH	5.61	
	Vegetative /M	2.48			Seeds / CH	3.24	
	Flowering /M	1.15			Vegetative / CH	3.15	
	Seeds /M	0.54			Fruiting /M	1.75	
	Vegetative / PE	0.34			Seeds / PE	0.43	
	Seeds /CH	0			Seeds / M	0.06	
	Seeds / PE	0			Flowering / PE	0	
	Flowering / PE	0	Less toxic (−)		Flowering / CH	0	Less toxic (−)
G%	Fruiting /CH	35.27	More toxic (+)	**Shoot length**	Vegetative /M	26.91	More toxic (+)
	Vegetative /CH	8.68			Seeds / CH	3.74	
	Flowering /CH	2.15			Fruiting / M	3.27	
	Fruiting /M	1.97			Vegetative / PE	2.66	
	Seeds /M	1.49			Fruiting / PE	2.09	
	Fruiting / PE	1.10			Fruiting / CH	1.61	
	Vegetative /M	0.74			Flowering /M	0.79	
	Flowering /M	0.37			Seeds /M	0.72	
	Seeds /CH	0			Flowering / CH	0.41	
	Seeds / PE	0			Seeds /PE	0.39	
	Flowering / PE	0			Vegetative / CH	0.21	
	Vegetative / PE	0	Less toxic (−)		Flowering / PE	0.17	Less toxic (−)

GI: Germination index; G: germination percentage. PE: petroleum ether; CH: chloroform; M: Methanol.