

(1) (1)

(% 50- 48) . % 32 % 30

.

:

(1)

Study of Some Chemical Properties of Terebinth Fruits and Extracted Oils

J. Karak⁽¹⁾ and R. Khreit⁽¹⁾

ABSTRACT

Terebinth trees have been occupying a good part of the mount of Syrian (abed elaziz, pelass). The Pistacia atlantica fruit, rich in oil, is used by local inhabitants in many ways, few studies investigation of the P. atlantica fruit oil of Syria has been carried out, This study investigates the protein, ash, crude oil and oil composition of P. atlantica with respect to total phenol, iodine value and saponification value, in order to classify it among the other known edible oils thenafter compare the oil composition with the oils of other Pistacia species. The fruit of P. atlantica appears to be rich in oil. The major fatty acid in the sample studied are oleic, linoleic, our results show that. The oil has a higher content of unsaturated FA (oleic + linoleic = 72%). The oil can be classified as an oleo-linoleic vegetable oil. The biochemical data showed an elevated MUFA content (50-48%) which may constitute an important property against certain pathologies for its nutritional and preventive virtues.

Key words: Terebinth, Protein, Oil, Unsaturated fatty acids, Oleic acid.

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Pistacia atlantica Desf.

P. terebinthus L.

Anacardiaceae

térébinthe, pistachier () Turpentine tree, terebinth tree :
() Tarpentinpistazie, Terpentinbaum () térébinthe
terebinto, pistacchio terebinto, corno frassano, scotano campestre,
(Bedevian,1936) () bottom () pistacchio giallo

7

(1) 5-8 x 5-6

(Ozenda ,1991) .



(1)

[Browicz,1988] 7000

Pistacia lentiscus

Pistacia palaestina

Pistacia khinjuk

Pistacia atlantica

(2001)

Pistacia

Bentley and Sincich, 2002)

(Trimen,1980;

(Delazar *et al.*, 2004)

(Hamdan and Afifi, 2004; Balan *et al.*, 2007)

Pistacia atlantica

(Yousfi *et al.*, 2002)

Pistacia

(Reza *et al.*, 2009; Jovanovic *et al.*, 1994)

DNA

-β

(Benhammou *et al.*, 2007)

Magiatis *et al.*, 1999, Delazar *et al.*,)

(2007

(Miraliakbari, 2008; Benhassaini, 2007)

(Yousf, 2009)

(1)

(1)

	()	()	
59.7	-	45	(%)
-	-	4.6	(/KOH)
94.2	-	85	(100/)
188.2	-	191	(/KOH)
			%
24.5 -22.8 - 9.6	12.21	24	0:16
1.2 - 1.4	-	1.2	0:18
54.8 -55.3 - 68.8	54.15	46	1:18
13.9 - 21 - 17.1	28.84	27.4	2:18
			%
-	-	1.5	
0.6	-	4.3	
6.3	-	-	
85	-	87	- β
1.7	-	4	- ⁵ Δ
-	-	3.2	- ⁷ Δ
6.4	-	-	

(Yousf, 2009 Miraliakbari,2008 Benhassaini, 2007).

-1

-2

-3

-4

-5

-6

-7

P.atlantica

. *Anacardiaceae*

2007

(2)



(2)

()

.(%)

.(AOAC, 2000)

(%)

.(AOAC, 2000)

(%)

.(AOAC,1990)

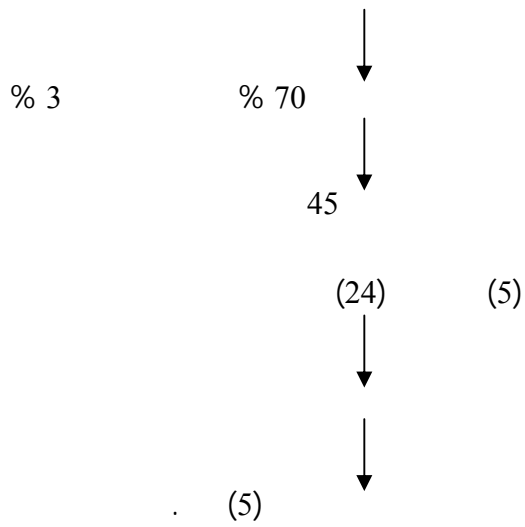
(/)

.(ISO 3960:1998)

.(ISO 660:1996)	(%)	-
.(ISO 3961 : 1996)	(100/) -
.(ISO 3657 : 1998)	(/KOH) -
:(Vázquez-Roncero <i>et al.</i> ,1973)	(/) -	
	50	10	
	.	1	
0.1		Folin-Ciocalteu	
725		/	
	(%)	-	
	:(Marquard , 1987)		
.910	Buck Scientific.Inc	-	
	. 0.53 30	-	
	/ 50 :	-	
	.(FID)	:	-
. 250 /	25 = /	-	
	. 240 :	230 :	210 :
		1	*
	5 :		*
	:		
.Malt extract agar base	()	-
.Mannitol salt agar base	() Staphylococcus	-
.MacConkey agar	() Escherichia coli	-
Bismuth	() Salmonella	-
		.sulphite agar	

*

: (Delgado, *et al.*, 2001)



$$100 \times \frac{50}{10} \times \frac{535}{2} \times \frac{250}{.3} = 100$$

):

:
 2
 (% 8.22)
 . %2.55
 (% 3.26 2.8)
 () %29.79 32.35

(Dubois, 2007) (1)

.()

.() (2)

(%)	(%)	(%)	(%)	
32.35	3.62	8.22	15	
29.79	2.8	2.55	17	

.(3= n)

:

P.atlantica

()

:()

3

.() % 2.01 2.15

:(/O₂) :

(3)

5.9)

(/

6.6)

. /

20

(USDA, 2004)

: **100 /** :

86.96

100 /

88.64

100 /

.()

: /KOH :

() /KOH 185.71 /KOH 188.61
C18 - C16

(3)

(/KOH)	(100 /)	(/)	(%)	
188.61	86.96	5.9	2.01	
185.71	88.64	6.6	2.15	

(3= n)

:

95 100
Reza *et al.*,) () /
Pistacia atlantica (2009
) / 62.84 81.12 *kurdica* subsp. *Mutica*
(

:

(4 3) (4)
% 99

%21.6 %48.5 %50.1 ()
(%71.7= +) () %23.7
(25.3= +) (%72.2= +)
(24.3= +)

4

(1)

Berry and) ./P.lentiscus P.terbinthus/

(Rivlin, 1997

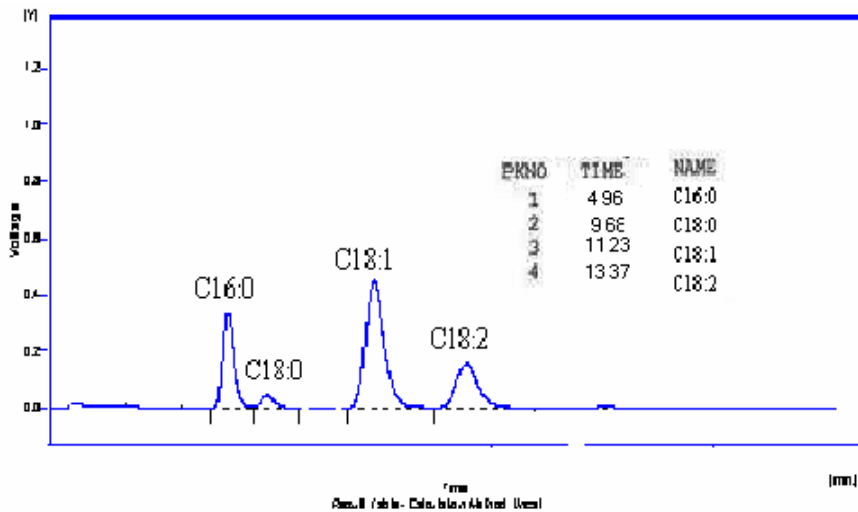
Krajcovicova- Kudlakova *et al.*,)

(1977

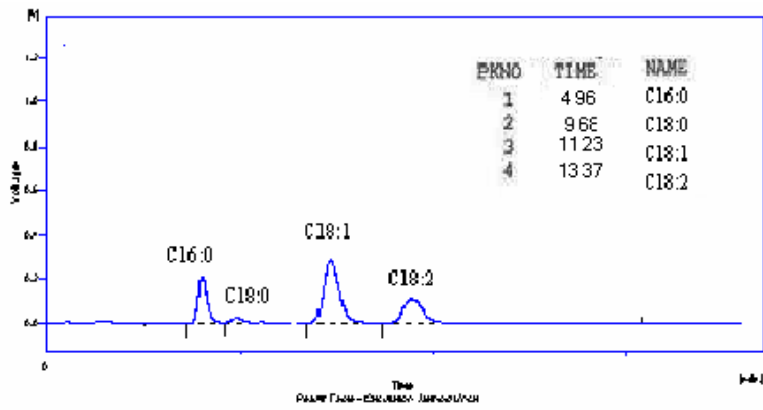
(4)

%	%	%	%	
3.4	20.9	23.7	48.5	
3.7	21.6	21.6	50.1	

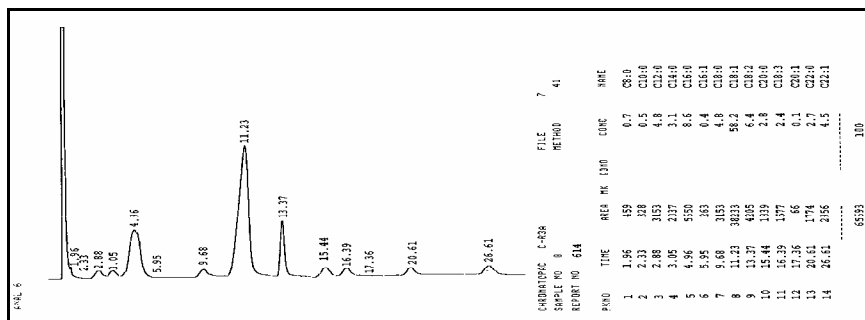
(3= n)



(2)



(3)



(4)

Salmonella Klebsiella aerogenes Escherichia coli
 Staphylococcus aureus
 (Penecillium Candida, Aspergillus)
 (Maggiatis et al., 1999)

:

(5)
(545)

(%43)
(535)

(5)

700	660	600	545	530	500	450	420	()
14	18	26	43	26	23	18	13	(%)

-1

%50-48

-2

P.atlantica

-3

%72-71

./ - /

-4

.()

-5

-6

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