

## Supplementary Table II

#### Essential oils identified (%) from different parts of *Peganum harmala*

Supplementary Table II

Essential oils identified (%) from different parts of *Peganum harmala* (Cont.)

References	Faridi et al., 2012	Afzal et al., 2014	Dastagir et al., 2014	Tahrouch et al., 1998	Tahrouch h et al., 1998	Tahrouch et al., 1998	Selim et al., 2013	Apostolico et al., 2016				
Compounds	Fruit (Iran)	whole plant (Pakistan)	Aerial part (Pakistan)	leaf (Morocco)	Stem (Morocco)	Root (Morocco)	Aerial part (Egypt)	Seed (Algeria)	Seed (Egypt)	Seed (Libya)	Seed (Morocco)	Seed (Tunisia)
1,2-Bis[1-(2-hydroxyethyl)-3,6-diazahomoadamantanyldene-9]hydrazine		13.2										
Cholestano[3,5-c]isoquinolin-1 '(2'H)-one ,3',4'-dihydro-6',7'-dimethoxy		3.6										
Bis[phenylsulfonyl]-4-trichloromethylphenyl chloromethane		5.3										
Sarreroside		2.2										
Uridine, 5-trihexyl-idecafluoro		8.6										
Hexatriacontane		3.7										
Butanedioic acid,2,3-bis[(tert-butyldimethylsilyly)oxy]-bis(tert-butyldimethylsilyly) ester		1.4										
Bis[4-[4-hydroxy]pipperidino-3-nitrophenyl] sunfone		1.3										
Timethyl(4-tert-butylphenoxy) silane		0.9										
Methanol,[4-(1,1-dimethylethyl) phenoxy]-, acetate		11.3										
Ergostane-5,25-diol,3,6,12-tris [(trimethylsilyly)oxy]-,25-acetate, (3 $\beta$ , 5 $\alpha$ , 6 $\beta$ , 12 $\beta$ )		0.7										
Alcanfor			28.2									
n-Octyl acetate				6.7								
trans-Geraniol					2.8							
$\alpha$ -Citril					2.6							
Geraniol-acetate					2.6							
Eugenyl methyl					9.7							
$\alpha$ -Curcumene						2.1						
Cyclohexyl ketone					6.7							
2(4H)-Benzofuranone, 5,6,7,7a-tetrahydro-4,4,7a-trimethyl					7.2							

Supplementary Table II

Essential oils identified (%) from different parts of *Peganum harmala* (Cont.)

References	Faridi et al., 2012	Afzal et al., 2014	Dastagir et al., 2014	Tahrouch et al., 1998	Tahrouch et al., 1998	Tahrouch et al., 1998	Selim et al., 2013	Apostolico et al., 2016				
Compounds	Fruit (Iran)	whole plant (Pakistan)	Aerial part (Pakistan)	leaf (Morocco)	Stem (Morocco)	Root (Morocco)	Aerial part (Egypt)	Seed (Algeria)	Seed (Egypt)	Seed (Libya)	Seed (Morocco)	Seed (Tunisia)
Citronellyl propionate			2.3									
$\alpha$ -Cedrol				1.4								
Elemicin				3.7								
Capillin				13.2								
p-Anisaldehyde				0.4								
6-Isopropyl-3,6-dimethyl-2-cyclohexane-1-one				0.5								
Germacrene D				0.2								
1H-Cycloprop[e]azulen-7-ol, decahydro-1,1,7-trimethyl				8.7								
Caryophyllene oxide				0.6								
(Z,E)-Farnesol				0.5								
Proprylic acid					2.8-11.1	11.5	46.3					
Butanol					3.5							
Pent-3-en-2-one					3.2-4.9							
Butyric acid					5.0		7.5					
(E)-3-Hexenol					2.2							
Methyl-4-methyl valerate					2.3	0.9-2.3						
(E)-2-Heptenal					1.3							
Tiglic acid							13.6					
3-Octanone					2.3-5.3	1.7-19.2						
5-Methyltetrahydrofurfural							6.7					
(E,E)-2,4-hexadienal					0.9-4.3							
Caproic acid					0.6	2.6	8.9					
Aniline					7.3							
N-Formylaniline					4.5	9.1						
Isoquinoline					1.4-6.4	3.9-4.6						
2,3-Dihydrobenzofuran					12.5	0.9-51.5						
N-Acetylaniiline					3.8-12.5							
(E,Z)-2,4-deca-dienal					2.8							
Indole					1.4							
Thymol						2.0						
(E,E)-2,4-deca-dienal					5.6							
Piperitenone						15.2						
5-Ethyldihydrofuran-2-one					0.5	4.2						
Isovanillin					1.8	2.3	13.4					
3,4-Dihydroxybenzene acetic acid						4.9						
$\beta$ -Ionone						8.1						
Dihydroactinidiolide					0.9							

Supplementary Table II

Essential oils identified (%) from different parts of *Peganum harmala* (Cont.)

References	Faridi et al., 2012	Afzal et al., 2014	Dastagir et al., 2014	Tahrouch et al., 1998	Tahrouch et al., 1998	Tahrouch et al., 1998	Selim et al., 2013	Apostolico et al., 2016				
Compounds	Fruit (Iran)	Whole plant (Pakistan)	Aerial part (Pakistan)	leaf (Morocco)	Stem (Morocco)	Root (Morocco)	Aerial part (Egypt)	Seed (Algeria)	Seed (Egypt)	Seed (Libya)	Seed (Morocco)	Seed (Tunisia)
6-Methyl-2-propylpyrimidone				3.5	5.1							
Pentadecane				0.5-1.0								
1,2-Dihydro-pyrin-6-one					2.6							
Myristic acid				4.8								
1-Hexyl-2-nitro-cyclohexane								9.1				
Z-2-Octadecen-1-ol								8.1				
3,5,24-Trime-thyltetracontane								7.8				
2-Octadecyl-1,3-propane-diol								6.2				
E-2-Tetradecen-1-ol								5.9				
11,14-Eicosadienoic acid methyl ester								5.8				
2,6,10,15-Tetra-methyl-hepta-decane								4.3				
11-Tricosene								4.1				
2-Piperidinone, n-[4-bromo-n-butyl]								3.5				
L-(+)-Ascorbic acid 2,6-dihexadecanoate								3.5				
14-Heptadecenal								2.9				
E-9-Tetra-decenoic acid								2.8				
1,1-Dodeca-nediol, diacetate								2.6				
2-Methyl-7-octadecyne								2.4				
2,6,10,14-Tetra-methyl-hepta-decane								2.0				
E-3-Pentadecen-2-ol								1.7				
16-Heptadecenal								1.6				
2-Dodecyl-oxi-rane								1.4				
E-15-Hepta-decenal								1.3				
Dl-3,4-Dimethyl-3,4-hexanediol								1.3				
9-Octyl eicosane								1.2				
1-(1,5-Dimethyl-4-hexenyl)-4-methylbenzene								1.0				
6,10,14-Tri-methyl-2-penta-decanone								0.8				

## Supplementary Table II

Supplementary Table II

Essential oils identified (%) from different parts of *Peganum harmala* (Cont.)

References	Faridi et al., 2012	Afzal et al., 2014	Dastagir et al., 2014	Tahrouch et al., 1998	Tahrouch et al., 1998	Tahrouch et al., 1998	Selim et al., 2013	Apostolico et al., 2016				
Compounds	Fruit (Iran)	Whole plant (Pakistan)	Aerial part (Pakistan)	leaf (Morocco)	Stem (Morocco)	Root (Morocco)	Aerial part (Egypt)	Seed (Algeria)	Seed (Egypt)	Seed (Libya)	Seed (Morocco)	Seed (Tunisia)
(E)-Anethol								3.7				6.9
$\alpha$ -Terpinen-7-al									2.2		1.0	0.1
Thymol								7.0		5.1	5.0	1.8
Dihydro carveol acetate								6.2	1.0	3.0	0.7	0.3
Terpinyl acetate									0.9			
4-Methoxy-acetophenone								1.0				
Eugenol							5.2	17.5	17.2	17.8	13.2	69.2
Cicloxsativenes								2.3				
$\alpha$ -Ylangene								1.1				
Decanoic acid									1.0			
$\beta$ -Cubebene											0.4	
n-Undecanol								2.3				
6,8-Nonadien-2-one,6-methyl-5-(1-methyl- etildene)								0.3				
iso-Italicene								1.1				
$\beta$ -Longipinene								0.5				0.1
Methyleugenol								0.3				
$\beta$ -Ionol										0.7		
(Z)-Caryophyllene								2.3	0.3			0.8
(E)- $\alpha$ -Ionone								0.6		0.2		
Nerol acetate									3.7			
$\alpha$ -Isomethyl-(E)-ionol								7				
Aromadendrene											0.3	
Bakerol										7.5		
trans-Cadin-16,4-diene										0.3		
9-epi-(E)-Caryophyllene											0.2	
$\alpha$ -Acoradiene								0.5				
$\gamma$ -Gurjunene										0.6		
$\gamma$ -Muurolene								0.3				
(E)- $\beta$ -Ionone										0.6		
(E)-Methyl isoeugenol								0.6			0.2	
10,11-Epoxy-Calamenene										0.3		
$\alpha$ -Zingiberene								0.3				
$\gamma$ -Amorphene								1.3			0.1	
Methyl p-tert-butylphenil acetate								0.3	0.8		2.0	0.2
10-Undecenol acetate								2.0			3.6	0.1
$\beta$ -Curcumene									1.9			
7- <i>epi</i> - $\alpha$ -Selinene								1.1				

Supplementary Table II

Essential oils identified (%) from different parts of *Peganum harmala* (Cont.)

References	Faridi et al., 2012	Afzal et al., 2014	Dastagir et al., 2014	Tahrouch et al., 1998	Tahrouch et al., 1998	Tahrouch et al., 1998	Selim et al., 2013	Apostolico et al., 2016				
Compounds	Fruit (Iran)	Whole plant (Pakistan)	Aerial part (Pakistan)	leaf (Morocco)	Stem (Morocco)	Root (Morocco)	Aerial part (Egypt)	Seed (Algeria)	Seed (Egypt)	Seed (Libya)	Seed (Morocco)	Seed (Tunisia)
2E,4E-Dodecan-dienal								1.2	2.1	2.0		
α-Thujaplicinol											4.8	
Eugenol acetate												9.0
α-Bulnesene											0.4	
(Z)-Nerolidol							0.5	1.6	2.5	1.3	0.1	
α-Calacorene							0.6			0.6		
Germacrene B									2.7		0.1	
β-Calacorene										1.8		
Dodecanoic acid								5.9				
Spathulenol							2.0	2.3	4.2	4.0	0.2	
Caryophyllene oxide							1.7		3.8	1.7	0.8	
1-Esadecene								1.6		0.9	0.2	
Ledol										0.4		
β-Oplopenone											0.1	
n-Exadecane							2.6		2.8	2.9	0.1	
Isolongifolan-7-α-ol									3.8	2.1	0.1	
Cubenol								2.0				
Caryophylla-4(12),8(13)-dien-5α-ol											0.1	
epi-α-Cadinol							5.3			0.9		
β-Acorenolo							1.5	2.9	7.4	2.3	0.1	
epi-α-Muurolololo											0.1	
cis-Guai-3,9-dien-11-ol							0.7					
allo-Aromadendrene epoxide										1.5		
Vulgarone B								1.4			3.7	
Cedr-8,15-en-10-olo									4.1	6.0		
α-Eudesmol									1.6			
14-Hydroxy-(Z)-caryophyllene										2.1		0.2
n-Tetradecanol							4.8	12.3	11.3	11.1	0.3	
Elemol acetate							0.7					
epi-α-Bisabololo								3.0	6.6			
Ciperotundone							1.6	3.0	4.6	4.1	0.1	
Eptadecane									1.2	3.8	1.2	0.1
Calamenen-10-one								0.5	1.9			
Longifolol								2.7				
Farnesol										0.4		
3-Otadecine							0.3					
Farnesale									1.0			
Santalol										1.0		
(E)-Nerolidil acetate										0.8		

## Supplementary Table II