
Artemisia L.

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(GC)

(GC/MS)

Minitab 11.12

A. fragrans
A. absinthium

Artemisia :

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Artemisia

Artemisia

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Artemisia

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A. absinthium

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Selinus
Peroxide

Chemotypes
Vax
Polyacetylenes
Sesquiterpenes
Essential oils

.() *A. absinthium*
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A. vulgaris
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 % ()
 .() GC
 () .() .()
 () A. ()
 . *absinthium*
 () .()
 . *A. scoparia*
 % / v/m ()
 . ()
 () *A. vulgaris*
 .()
A. absinthium .() *A. sieberi* ()
 .() *A. aucheri*
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A. absinthium (A. *fragrans*)
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 .() () . *A. fragrans*
A. scoparia
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: *Artemisia*
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C-R3A- Chromatopac :
 Area) : A. *A. vulgaris* *A. spicigera* *A. scoparia*
 (Normalization / / / / *absinthium*
 DB :

(GC/MS)
 Varian- 3400 GC/MS
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Minitab11.12

GC/MS

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AS_{\downarrow}	ديپلوئيد	<i>A. spicigera</i> ()	
AV	ديپلوئيد	<i>A. vulgaris</i>	
AF_{\downarrow}	تتراپلوئيد	<i>A. fragrans</i> ()	
AS_{\uparrow}	تتراپلوئيد	<i>A. spicigera</i> ()	
ASC	ديپلوئيد	<i>A. scoparia</i>	
AF_{\uparrow}	تتراپلوئيد	<i>A. fragrans</i> ()	
AI	ديپلوئيد	<i>A. incana</i>	
AA	ديپلوئيد	<i>A. absinthium</i>	

AF_{\downarrow}

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AF_{\uparrow}

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AI

ASC

$AF_{\downarrow} - AF_{\uparrow}$ $AS_{\downarrow} - AS_{\uparrow}$

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 (% /) AA

AA	AI	ASC	AV	AF _v	AF _s	AS _v	AS _s		
/	/				/	/	/	:	tricyclene
	/	/		/				:	α-pinene
/					/	/	/	:	camphene
	/	/			/			:	sabinene
/		/	/		/	/		:	β-pinen
/		/	/	/	/			:	myrcene
				/				:	cumene
/								:	α-Phellandrene
/	/	/	/	/	/	/	/	:	p-cymene
/		/				/	/	:	limonene
/	/	/	/		/	/	/	:	1,8-Cineole
/		/			/	/		:	(Z)- β- ocimene
		/						:	(E)- β- ocimene
		/			/	/		:	δ-terpinene
			/		/	/	/	:	trans sabinene hydrate
/							/	:	artemisia alcohole
								:	eucarvone
/								:	linalool
			/					:	n-nonanal
	/	/		/			/	:	α-thujone
/	/			/	/	/	/	:	β-thujone
				/				:	chrysanthenone
	/	/		/	/	/	/	:	trans pinocarveol
/	/		/	/	/	/	/	:	camphor
				/				:	trans verbenol
			/	/	/	/	/	:	Pinocarvone

<i>AA</i>	<i>AI</i>	<i>ASC</i>	<i>AV</i>	<i>AF_γ</i>	<i>AF_δ</i>	<i>AS_γ</i>	<i>AS_δ</i>		
/	/		/	/		/	/	:	borneol
		/						:	lavendulol
					/			:	artemisyl acetate
	/		/		/			:	Terpinen-4-ol
			/					:	α-terpineol
		/		/				:	myrtenol
			/					:	n-decanal
	/			/		/	/	:	verbenone
/								:	neral
					/	/	/	:	cis-sabinene hydrate acetate
					/	/	/	:	Piperitone
					/	/		:	cis-verbenyl acetate
/	/		/		/	/	/	:	bornyl acetate
			/					:	α-terpinyl acetate
			/					:	α-copaene
			/					:	β-patchoulene
			/					:	β-elemene
						/		:	cis-jasmone
		/						:	methyl eugenol
			/					:	α-gurjunene
/		/	/					:	β-caryophyllene
/								:	(z)-trans-α-bergamotene
		/						:	α-humulene
			/					:	allo-aromadendrene
/			/					:	δ- muurolene
			/					:	β- selinene
		/	/					:	bicyclogermacrene
/								:	β- bisabolene
/			/					:	δ-cadinene
			/					:	germacren B

...

AA	AI	ASC	AV	AF _γ	AF _δ	AS _γ	AS _δ		
/	/		/		/	/		:	spathulenol
/				/				:	caryophyllene oxide
			/					:	globulol
/			/					:	guaiol
/								:	Chamazulene

%

ASC

AF1, AS1,)

AF_γ

(AS2

/

AF_γ

()

AF_δ

ASC

AV

AS_δ - AS_γ

AS_δ

AF_δ - AF_γ AS_δ - AS_γ

AS_γ

AS_δ

ASC AF_γ AA

AI

A. absinthium *A. vulgaris*

ASC

AF_δ

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()

AS_γ AF_γ

AV

Seriphidium

A. vulgaris

AS_γ AF_δ

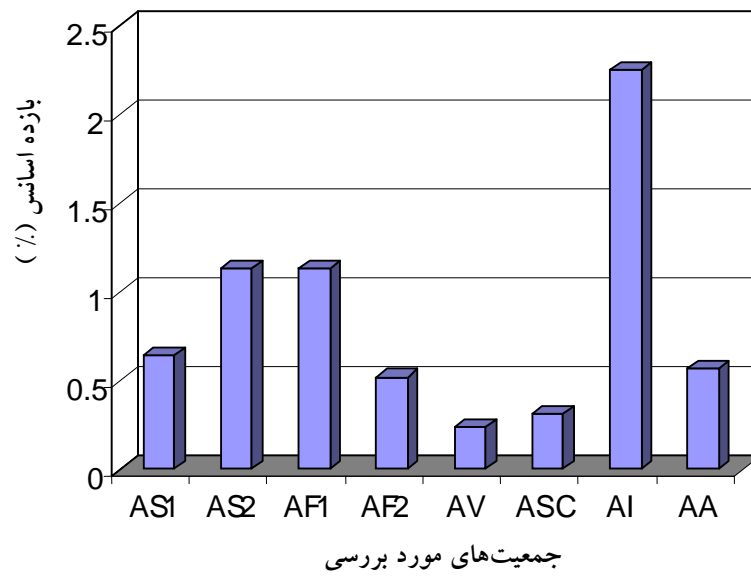
Artemisia

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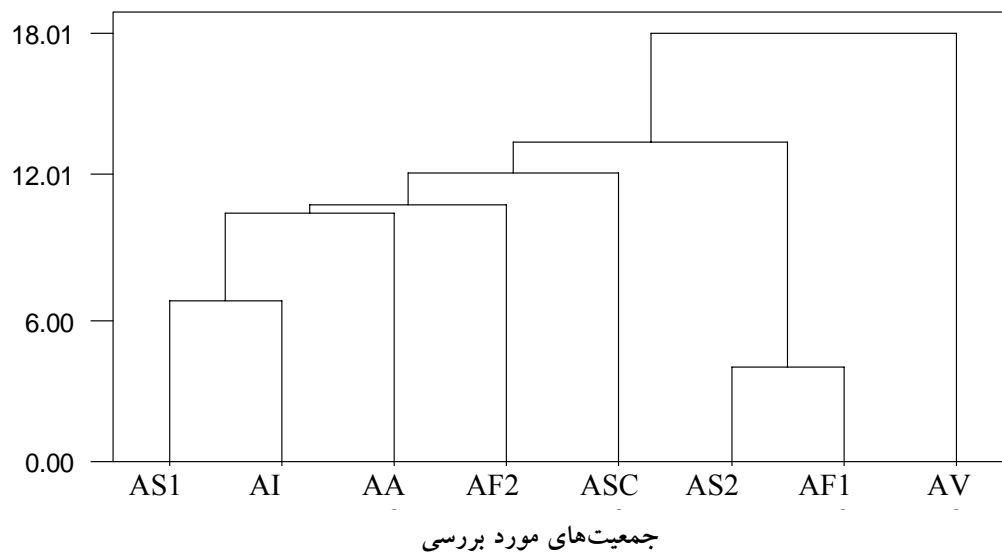
AA

AS₁ AS₂

Artemisia



فاصله



Artemisia sieberi Besser

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A. aucheri Boiss

Artemisia fragrans Willd.

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Essential oil studies in eight populations of *Artemisia* L. species in Azarbaijan-e-Gharbi, Iran

K. Saedi*¹, H. Azarnivand², A. Jalili³, F. Sefidkon³ and M. Jafari⁴

¹ Scientific member, Agriculture and Natural Resources Research Center of Kurdistan, I. R. Iran

² Associate Prof, Faculty of Natural Resources, University of Tehran, I. R. Iran

³ Scientific member of Research Institute of Forests and Rangelands, I. R. Iran

⁴ Professor, Faculty of Natural Resources, University of Tehran, I. R. Iran

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Abstract

Considering *Artemisia-Astragalus* as the largest community in Iran, currently, basic studies are conducting on *Artemisia* spp. properties. Ecologic-systematical aspects of essential oil studies of eight populations (six species) of the genus were dealt in Azarbaijan-e-Gharbi. In this study, generative browses containing flowers of different species/populations were gathered in the same phenological stage. After preparing dry matter of the browses in open air, water distillation applied for obtaining essential oils used for investigating constituents by GC and GC/MS. To conduct a comparison between different studied taxons, a cluster analysis was used in Minitab 11.12. The results showed that there were two different chemotypes of *A. fragrans* and the oil was free of common detected toxic components in *A. absinthium*. The resulted cluster proved the inefficiency of chemical data in systematical categorizing of different taxons even in subgenus levels.

Keywords: *Artemisia*, Population, Essential oil, Systematic, Azarbaijan-e-Gharbi.