

## Volatile Components of *Stachys corsica* Pers. (Lamiaceae)

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### Abstract

Nineteen volatile components were identified by GC/MS from the dichloromethane extract of air-dried *Stachys corsica*. Carvacryl acetate, linalool,  $\alpha$ -terpenyl acetate and  $\alpha$ -terpineol were the main volatiles.

### Key Word Index

*Stachys corsica*, Lamiaceae, volatile components, carvacryl acetate, linalool,  $\alpha$ -terpenyl acetate,  $\alpha$ -terpineol.

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### Plant Name

*Stachys corsica* Pers. (= *S. circinnata* Mut.). Local name: "U nizzu" (1-3).

### Source

Plant material was collected in August 1994 from the Forest of Vizzanova, near Corte (Corsica, France). A voucher specimen was preserved in the Herbarium at the Faculty of Pharmacy (University Montpellier I, France).

### Plant Part

Volatile components of air-dried *Stachys corsica* were extracted with dichloromethane in a Soxhlet apparatus for 5 h. The extract was concentrated to a small volume under nitrogen and used directly for GC/MS analysis (4).

### Previous Work

As far as we know, the volatile components of *Stachys corsica* have never been analyzed, except as a preliminary report on Lamiaceae from Corsica (4).

### Present Work

Analysis of the organic extract from *S. corsica* was performed on a Hewlett-Packard GC/MS system (5).

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Received: December 1997  
Accepted: January 1998

Table I. Identified volatile components of *Stachys corsica* extract

Compounds	Percentage	Compounds	Percentage
linalool	13.4	eugenol	6.3
terpinen-4-ol	1.1	carvacryl acetate	37.5
p-cymen-8-ol	0.4	(E)- $\beta$ -damascenone	2.6
$\alpha$ -terpineol	7.8	(E)- $\alpha$ -ionone	1.7
myrtenol	0.2	$\beta$ -ionone	3.5
piperitone	0.2	$\beta$ -ionone epoxide	3.0
pulegone	1.2	dihydroactinidiolide	0.8
carvone	1.6	cedrol	1.3
octanoic acid	0.7	benzyl benzoate	0.4
$\alpha$ -terpinyl acetate	7.7		

The chromatograph was fitted with a 25 m x 0.25 mm polydimethylsiloxane DB-1 (fused film thickness: 0.25  $\mu$ m) silica capillary column. The carrier gas was helium with a flow rate of approximately 0.9 mL/min; the injector and detector temperatures were 200°C and 220°C, respectively. The column was temperature programmed as follows: 60°-200°C (3°C/min). The mass spectra were recorded on a mass selective quadrupole-type detector of the HP5970A class, using a potential of 70 eV for ionization by electron impact. Volatile compounds were identified by their MS spectra and retention indices (6,7).

The volatiles of *S. corsica* extract are listed in Table I in order of their elution. The main volatile components of *S. corsica* extract were carvacryl acetate, linalool,  $\alpha$ -terpinyl acetate and  $\alpha$ -terpineol. The extract also produced high levels of ionones and damascenone. The volatile composition of *S. corsica* characterized by a high level of arenic terpenes was close to those of *S. cretica anatolina* and *S. obliqua* reported by Kirimer et al. (8) and Harmandar et al. (9), respectively. On the other hand, the volatile composition of *S. corsica* was very different from that of *S. glutinosa*, a plant that grew on the same biotope as that of *S. corsica* (10).

#### Acknowledgments

The authors wish to thank G. Paradis for the plant determination, and M. Milhau and C. Quastana for their technical assistance.

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