

**CHEMICAL COMPOSITION OF THE LEAF
ESSENTIAL OIL OF *Zhumeria majdae*
GROWING IN SOUTH IRAN**

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The monotypic and endemic Iranian *Zhumeria majdae* Rech. F. (Lamiaceae), known locally by the name of Mohrekhosh, was recently described as the first member of a new genus of *Zhumeria* [1]. It has a limited geographical range in southern Iran [2]. In folk medicine, the leaves have been used for many years as a curative for stomach aches, as an antiseptic, and for the treatment of painful menstruation [3]. The antinociceptive, anti-inflammatory, and acute toxicity properties of the extract of *Z. majdae* were reported by Hosseinzadeh et al [4]. Two new diterpenes with rearranged abietane skeletons from the roots of *Z. majdae* were previously studied [5]. Because of the various uses of *Z. majdae* and its essential oil, I decided to study the constituents of the leaf essential oil of *Z. majdae* from Geno mountain, Hormozgan province, south of Iran.

The present paper deals with the detailed analysis of the oil by capillary GC and GC-MS with the determination of the percentage composition. The aerial parts of *Z. majdae* yielded 7.5% v/w of a yellowish oil, which was determined by the gravimetric method and calculated as a percentage with respect to the mass of starting dry plant material. In this oil 22 components, which represented about 99% of the total composition, were identified and listed in Table 1 with their percentage compositions. The constituents are listed in the order of their elution from HP-5MS column. This oil consisted mainly of eleven monoterpene hydrocarbons (13.8%), eight oxygenated monoterpenes (83.7%), and two sesquiterpenes (0.6%). The major components are camphor (42.1%), linalool (35.6%), camphene (4.1%), and limonene (3.4%). This is a first report on the leaf essential oil analysis of *Z. majdae* from Geno mountain. According to the data from Table 1 on the essential oil of *Z. majdae* in the province of Hormozgan, South of Iran, the monoterpenes are the main components (97.5%) relative to sesquiterpenes (0.6%).

TABLE 1. Composition of the Essential Oil of *Z. majdae* from South Iran

Compound ^a	Percentage	RI ^b	Compound ^a	Percentage	RI ^b
α -Pinene	1.6	931	Terpinolene	0.3	1087
Camphene	4.1	947	<i>cis</i> -Linalool oxide	0.8	1089
3-Octanone	0.9	985	Linalool	35.6	1108
Myrcene	1.7	988	Camphor	42.1	1152
α -Phellandrene	0.1	1002	Terpinen-4-ol	0.7	1179
α -Terpinene	0.4	1014	α -Terpineol	2.8	1194
ρ -Cymene	0.5	1023	Nerol	0.8	1224
Limonene	3.4	1027	Neral	0.2	1244
(<i>Z</i>)- β -Ocimene	0.5	1035	β -Caryophyllene	0.3	1422
(<i>E</i>)- β -Ocimene	0.7	1046	Caryophyllene oxide	0.3	1593
γ -Terpinene	0.5	1057	Total	99	
<i>trans</i> -Linalool oxide	0.7	1073			

^aCompounds listed in order of their RI; ^bRI (retention index) measured relative to *n*-alkanes (C₉–C₁₉) on a nonpolar HP-5 column; %: relative percentage obtained from peak area.

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