

#### 4.2 = CHEMICAL COMPOSITION OF THE ESSENTIAL OIL OF *CLADANTHUS SCARIOSUS* (ASTERACEAE) WILD GROWN IN MOROCCO

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*Cladanthus* Cass. [Syn. *Ormenis* (Cass.) Cass.] is a genus of the family *Asteraceae*, endemic to the Mediterranean region and related to the tribe *Anthemideae* (1). It comprises 15 species including *C. scariosus* (Ball) Oberpr. & Vogt [Bas. *Santolina scariosa*; Syn. *Ormenis scariosa* Litard. & Maire] from Morocco where it concentrates 1/3 of the species of the genus (2). Some of these are perennial, suffruticose and strongly aromatic plants. *C. mixta* (L.) Chev. is used in Morocco as chamomile and this is commonly called Moroccan chamomile. In the same country, *C. scariosus* is fairly common in open places, on sandstone substrates (3) and is characterized by a strong aromatic character, this has motivated the authors – some of which were previously occupied by other species of the same genus (4) – to undertake such study phytochemical.

In this study, the authors present the results of chemical composition of the essential oil of *Cladanthus scariosus* wild grown in many regions of Morocco (5).

Hydrodistillation of *C. scariosus* aerial parts, collected on the thermo-mediterranean belt of the central High Atlas – Oukeimeden, from Marrakech to Quarzazate – during the flowering phase gave a pale yellow oil. Overall, sixty-four compounds were identified, representing 92.7% of the total components. The main class of the oil was represented by sesquiterpene hydrocarbons (39.8%) with germacrene D (20.7%) as the most abundant component of the class and of the oil. Monoterpene hydrocarbons, oxygenated monoterpenes and oxygenated sesquiterpenes were present in similar amount (14.8%-15.1%). In these classes the main products were  $\alpha$ -pinene (4.8%) and sabinene (6.9%) among the monoterpene hydrocarbons, (*E*)-chrysanthenyl acetate (8.3%) among the oxygenated monoterpenes and  $\tau$ -muurolol (4.2%) and (*E,E*)-farnesyl acetate (3.9%) among the oxygenated sesquiterpenes. It is also noteworthy the good presence of chamazulene (7.1%).

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