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The chemical composition of the essential oils of two Mediterranean species of Convolvulaceae: *Convolvulus althaeoides* subsp. *tenuissimus* collected in Sicily (Italy) and *Calystegia silvatica* collected in Algeria

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ABSTRACT

Convolvulus L. and *Calystegia* R.Br. are two closely related genera of the Convolvulaceae family distributed in Asia, Mediterranean, Macaronesia, East Africa, and Arabia, including about 210 and 30 accepted species, respectively, of flowering plants, present as trees, shrubs, and herbs. The ethnomedical use of *Convolvulus* species dates to 1730s as they displayed profuse medicinal properties. In the present study, the not previously investigated chemical compositions of the essential oils from aerial parts of *Convolvulus althaeoides* subsp. *tenuissimus* (Sm.) Bat., collected in Sicily, and *Calystegia sylvatica* (Kit.) Griseb., collected in Algeria, were evaluated by GC-MS. The main components of the essential oil of the first one were *β*-caryophyllene (28.68%), *γ*-muurolene (23.75%), and *γ*-elemene (17.55%), whereas the *C. silvatica* essential oil was shown to be rich of valeranone (10.77%), viridiflorol (9.45%), and germacrene D (8.61%). Furthermore, a complete literature review on the ethno-pharmacological uses of *Convolvulus* and *Calystegia* species was performed.

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