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PP8. New neryl esters from *Helichrysum italicum* essential oil

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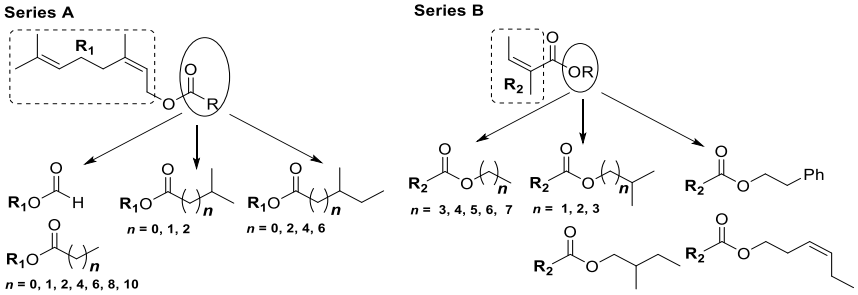
Helichrysum italicum (Roth) G. Don (*Asteraceae*), commonly known as the everlasting or curry plant, is endemic to the Mediterranean region where at least 3 subspecies can be found. The typical subspecies (*italicum*) produces an essential oil rich in the acetate (≥ 30%) and propionate (≥ 5%) of nerol, and the characteristic β-diketones (≥ 10%). It is appreciated by perfumers because of the spicy saffron character well complemented with curry, nutty and celery facets [1]. As esters are an important group of aroma-active volatiles, in this work we aimed to study the composition of the ester fraction of the mentioned everlasting essential-oil chemotype. After chromatographic separations, our attention was focused on the ester fraction that contained numerous minor neryl and angeloyl esters undetectable in the direct GC-MS analyses of the unfractioned oil (series A and B, respectively; Fig. 1). Three esters of nerol and medium-chain *anteiso*-fatty acids (C_7, C_9 and C_{11}) represented new natural products, while several other esters (e.g. neryl decanoate and dodecanote, and phenethyl, heptyl and octyl angelates) have a rather restricted occurrence in the Plant Kingdom. Our study disclosed an extensive diversity of volatile esters present in the studied chemotype, some of which may contribute to the overall aroma-profile of the essential oil.

Fig. 1. Structures of neryl and angeloyl esters identified in *H. italicum* essential oil



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