

PP94. Lily of the valley flower volatiles: the chemical composition of the flower diethyl ether extract

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Convallaria majalis L. (Asparagaceae) commonly known as lily of the valley, is popular for the intense and elegant fragrance of the white, bell-shaped flowers. In perfumery, the complex scent of lily of the valley flowers is called the muguet scent. It has something in common with the scent of jasmine, rose and lilac, however, it cannot be imitated by a single compound [1]. In 1956, the French firm Dior created the typical muguet perfume “Diorissimo” (one of the greatest lily of the valley fragrances of all time). Other perfumes imitating or based on this flower scent include “La Muguet” by Annick Goutal, “Muguet” by Guerlain, “Muguet du Bonheur” by Caron, “Varens essential Muguet Secret” by Ulric de Varens etc. The absolute of lily of the valley flowers is used in aromatherapy to help ease headaches, depression, and melancholy; also it is most often found in soaps, creams, and washing powders. However, all parts of this plant are very poisonous; they contain over 30 different types of cardioactive glycosides.

The purpose of this work was to investigate the volatile constituents of a diethyl ether extract of *C. majalis* flowers from Serbia for the first time. GC and GC-MS analyses demonstrated that along components of the flower wax, the main potentially odor-active constituents of the extract were benzyl alcohol, citronellol, geranyl acetate, 2,3-dihydrofarnesol, (*E*)-cinnamyl alcohol, and (*E*)- and (*Z*)-isomers of phenylacetaldehyde oxime. Such a chemical profile was similar to the previously described in the study of the headspace volatiles of lily of the valley flowers [2]. An oxime of phenylacetaldehyde was reported for the first time as a natural product by Sakurai *et al.* in 1979, occurring in the flower of *Citrus unshiu* and that was characterized as one of the compounds responsible for the flower scent [3].

References:

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