

CHEMICAL CONSTITUENTS AND BIOLOGICAL ACTIVITY OF ESSENTIAL OIL OF *Lavandula luisieri* FROM PORTUGAL

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Lavandula luisieri (Roseira) Riv.-Mart. is a member of *Labiatae* family endemic of the Iberian Peninsula, growing wild in slaty or calcareous soils of Center and South of Portugal¹ and Spain. Lavender has been extensively used as a medicinal plant and the essential oils of different species are of economic importance in cosmetic, fragrances, food and aromatherapy industries.²

The purpose of our study is to characterise for the first time the chemical composition of essential oil of wild *L. luisieri* from Alentejo region, by GC, GC-MS and ¹³C NMR analysis. *L. luisieri* essential oil, obtained by industrial steam distillation, was purified by column chromatography on silica gel and some major irregular monoterpenoids of necrodane type were isolated, characterised and identified by spectroscopic data and were used as standards for the analysis by CG.

The quantitative analyses of GC of the essential oil showed 1,8-cineole (22.2-32.2%) and *trans*- α -necrodiyl acetate (20.6-13.0%) as the major components; lower concentrations were found for α -pinene (5.3-7.5%), camphor (5.4-6.3%), *trans*- α -necrodol (5.8-4.6%) and linalool (3.5-4.1%). These results are in agreement with those by Garcia-Vallejo *et al.* that reported Spanish *L. luisieri* oil as having an atypical composition, unique in the plant kingdom.^{3,4}

L. luisieri is genetically well differentiated from other *Lavandula* species, and the presence of necrodane monoterpenoids can be considered as a marker.

Antibacterial activity was tested against six methicillin resistant *Staphylococcus aureus* (MRSA) isolates. All six MRSA isolates demonstrated to be susceptible to the essential oil of *L. luisieri*.

References

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Acknowledgement: Authors thank Eng. François Goris by essential oil samples.