

P22 - Structural elucidation of natural 2-Hydroxy Di- and Tricarboxylic Esters, Phenylpropanoid Esters, and Flavonoids extracted from the bulbs of *Autonoë madeirensis* using GC-EIMS, ESIMS and MS/MS techniques

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Autonoë madeirensis (Menezes) Speta is a *Hyacinthaceae* endemic from the Portuguese Archipelago of Madeira.^{1,2} Previous studies on *Hyacinthaceae* species have shown that they produce a large number of biologically important secondary metabolites, such as triterpenoid and steroid glycosides³, flavone and homoisoflavanone glycosides⁴ and polyhydroxyalkaloids.⁵

Included in a systematic phytochemical study of the bulbs of *A. madeirensis*, we report now the structural identification of three different classes of compounds, mainly by GC-EIMS, ESIMS and tandem mass spectrometry.

The phytochemical study was performed using total ethanolic extracts that were fractionated by solvents of increasing polarity. The compounds identified were 2-hydroxy di- and tricarboxylic acids and esters (malic acid, ethylmethylmalate, diethylmalate, citric acid, monomethylcitrate, monoethylcitrate and triethylcitrate), hydroxycinnamic esters (methyl *p*-coumarate, ethyl *p*-coumarate, and methyl ferulate), and the three major anthocyanins (cyanidin coumaroyl glycoside, peonidin coumaroyl glycoside and delphinidin diacetyl diglycoside) and a flavone diglucoside, being the interglucosidic linkage (1→2), to the best of our knowledge, reported for the first time in a diglucoside of apigenin.

The analytic conditions, retention times and fragmentation pattern reported now may constitute a fast tool for the systematic identification of these compounds in plant extracts.

References

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