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HPLC-DAD-ESI-MS analysis of phenolic compounds from Eucalyptus globulus fruits

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The present study consists on the characterization and evaluation of antioxidant activity of phenolic compounds of fruits of $Eucalyptus\,globulus\,(E.\,globulus)$. A method based on high-performance liquid chromatography coupled with diode array detection and electrospray ionization mass spectrometry (HPLC-DAD-ESI-MS) following fractionation by chromatography on a Sephadex LH-20 column has been developed. The presence of 18 gallotannins, 26 ellagitannins, and 2 flavonols was established. Tentative identification is provided for these compounds on the basis of UV-visible spectra and mass spectrometry data. Most compounds described in this study have not previously detected in fruit of $E.\,globulus$. Moreover, this is the first report of methyl digalloyl diglucose, 3, 3-0 -dimethylellagic acid 4- - β -glucopyranoside, ellagic acid hexose, methyl ellagic acid pentose, methyltetragalloylglucose, and valoneic acid isomers (sanguisorbic, flavogallic acid dilactone) in the genus. Quantitatively, ellagic acid and its derivatives, including ellagitannins, are largely predominant.

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