

Quercus ilex L.: How season, Plant Organ and Extraction Procedure Can Influence Chemistry and Bioactivities

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Description :

Quercus species have a plethora of applications, either in wine and wood industries, in human and animal nutrition or in human health. In order to improve the knowledge on this genus, the aim of the present study was to correlate, for the first time, the phenolic composition of different Quercus ilex L. plant tissues (leaves in two maturation stages, acorns, teguments and cotyledons) and different extraction procedures with scavenging and anticholinesterase activities. The hydromethanolic and aqueous extracts obtained showed strong radical scavenging activity against DPPH, superoxide anion radical and nitric oxide radical, leaves exhibiting higher total phenolic content and revealing the best antioxidant properties, followed by tegument and acorns. Concerning the phenolic profile, fifteen compounds were identified and quantified by HPLC- DAD, ranging from 1568.43 to 45,803.16 mg/kg dried extract. The results ...

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