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Seasonal Variation in Phenolic Constituents of Hazelnut (*Coryllus avellana* L.)
and Chestnut (*Castanea sativa* Mill.) Leaves and Shoots

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Abstract: In this research, the seasonal variation in total phenolic contents in hazelnut and chestnut leaves and shoots was determined. In addition, the phenolic compounds extracted by aqueous alcohol or obtained by acid hydrolysis of the leaves and shoots were separated by paper chromatography (PC). The total phenolic contents of the chestnut leaves and shoots were higher than the hazelnut. In both species, the young shoots had higher total phenolic contents than one year old shoots. The total phenolic content of hazelnut leaves did not show a significant variation, but it rose up to a relatively higher level in August and October. A similar pattern of variation was obtained in the phenolic contents of chestnut leaves. The hazelnut leaf aqueous extracts gave a total of 10 different compounds when separated by two dimensional PC (2 % acetic acid on the first dimension, n-butanol: acetic acid: water on the second dimension). When the chestnut leaf extracts were separated by the same technique, a total of 8 different compounds were obtained on the chromatograms. One dimensional chromatograms obtained by forestal solvent showed that there were 10 and 11 different compounds separated from the leaves of hazelnut and chestnut respectively.

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