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Phytochemical characterization and antioxidant activity of methanolic extracts and infusions of *Laurus nobilis* L. leaves: wild *versus* cultivated samples

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Laurus nobilis L., commonly known as bay leave, is a medicinal and aromatic plant of Lauraceae family, being widely used in many food products as a flavouring agent. The leaf extract is used in folk medicine for its anticonvulsive and antiepileptic activities, but also against migraine, headaches, bacterial and fungal infections and gastric ulcers; the infusions are used for its diuretic and carminative properties.[1]

Herein, wild and cultivated samples of *L. nobilis* leaves were chemically characterized for nutritional value, free sugars, organic acids, tocopherols and fatty acids, determined by chromatographic techniques. Furthermore, antioxidant activity of their methanolic extracts and infusions was also evaluated through free radicals scavenging, reducing power and lipid peroxidation inhibition assays. Data showed that the wild sample possessed higher nutritional value related to a higher content of proteins, free sugars, organic acids, polyunsaturated fatty acids (PUFA) and tocopherols. It also gave better PUFA/SFA (saturated fatty acids) and n-6/n-3 ratios. Regarding antioxidant activity and phenolic compounds, it was the cultivated sample (mostly the infusions) that showed the highest values.

The present study supports the arguments defending the use of wild and cultivated medicinal and aromatic plants as both present very interesting features, whether nutritional or antioxidant. *In vitro* culture could be applied to *L. nobilis* as a production methodology that allows combination of the benefits of wild and cultivated samples.

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References

[1] a) Simić, M. Kundaković, T. Kovačević, N. *Fitoterapia* **2003**, *74*, 613-616. b) Polovka, M. Suhaj, M. *Food Chem.* **2010**, *119*, 391-401.