



## Evaluation of the chemical composition and antioxidant activity extracts and fractions from the vegetal species *Ocotea notata* (Ness) Mez (LAURACEAE)

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The *Ocotea* genus belongs to the family Lauraceae, and it is distributed in the tropical and subtropical regions, including approximately 350 species <sup>[1]</sup>, being source of neolignans, benzyloquinoline alkaloids and flavonoids. The family has some members with present aromatic properties assembling great importance in the pharmaceutical industry, especially in the perfumery, in which are used as flavorings<sup>[2]</sup>. Considering the great interest by the natural product chemists on the search for new species with antioxidant potential, the goal of this work is to analyze the chemical profile of the crude extract and fractions from the leaves of *O. notata* with subsequent analysis of the antioxidant activity by colorimetric methods such as DPPH and iron chelating. From the crude ethanolic extract there were performed the liquid-liquid partition with different polarity solvents obtaining the ethyl acetate, butanol and aqueous fractions. In order to investigate the possible classes of substances present there were performed thin layer chromatographies (TLC), adopting BAW- (butanol : acetic acid: water; 8: 1: 1) as solvent system. The ethyl acetate and butanol fractions were revealed with NP-PEG, followed by ultraviolet (UV) detection. There were detected the presence of flavonoids, corroborated by HPLC-DAD, in which the correspondent UV spectra were characteristic of this chemical class (210, 256 and 352 nm) for the majority of the peaks detected. Concerning the antioxidant activity, the ethanol extract and the corresponding fractions were tested at 0,4 µg/mL; 0,85 µg/mL; 1,75 µg/mL; 3,5 µg/mL; 7,0 µg/mL; 14 µg/mL and 30 µg/mL by the DPPH method (radical scavenging activity). They exhibited EC<sub>50</sub> values, such as: 4,15 µg/mL (crude extract), 4,02 µg/mL (ethyl acetate), 5,04 µg/mL (butanol), 6,31 µg/mL (aqueous), lower than that exhibited by the standard *G. biloba* (23,29 µg/mL). By the ferrous ion chelating test all samples exhibited around 100% activity at 5 µg/mL, higher than that presented by quercetin 54,90% at the same concentration. All experiments were developed in triplicate. The results presented show to be promising for *O. notata* extract and fractions and, it should be related to the presence of flavonoids. Further studies with purified constituents from the bioactive fractions are required in order to identify the substances responsible for the antioxidant activity observed.



**References:** 1- Plant part substitution – a way to conserve endangered medicinal plants; *Journal of Ethnopharmacology* 71 (2000) 281–292

2- Sayaka Takaku, Haber W. A., N. Setzer W. (2007). Leaf Essential Oil Composition Of 10 Species Of Ocotea (Lauraceae) From Monteverde, Costa Rica. *Biochemical Systematics And Ecology* 525 e 532.

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