Evaluation of Antioxidant Activity of Yerba-mate (*Ilex paraguariensis*)
Extracts by DPPH Assay

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**INTRODUCTION**- Yerba-mate (*Ilex paraguariensis* St. Hil.), is a herbal tea beverage consumed in Latin American countries, receiving the designations: “mate”, “chimarrão” or “tererê”. The chemical constituents found in mate include tannins, polyphenols, amino acids, alkaloids, and others. Is considered a strong correlation between antioxidant activity and phenolic compounds presents in mate, the *Ilex paraguariensis* ingesting extracts could contribute to increasing the body’s antioxidants defenses minimizing the oxidative stress. The *in vitro* antioxidant activity was evaluated using the 2,2-difenil-1-picril-hidrazil assay (DPPH). **OBJECTIVE**- Evaluation of antioxidant activity of Yerba-mate extracts by DPPH assay in nine herbal compounds. **MATERIALS AND METHODS**- The herbal compounds were purchased from a commercial establishment in the Argentina, Brazil and Uruguay. The aqueous extracts were obtained mimicking the "mate" using a medium size gourd, yerba mate, “mate pump”, Kitasato flask and a vacuum pump. The extracts of 1°, 2°, 5°, 10°, 15° infusions (mates) were filtered, and stored in eppendorfs to subsequent analysis. The antioxidant activity of the extracts was evaluated by monitoring their ability in quenching the stable free radical DPPH. The absorbance was measured by espectrophotometry at 517 nm. The positive standard was ascorbic acid. Data were statistically analyzed by one- way ANOVA. Statistical significance was accepted at p< 0.05. **RESULTS**- All extracts showed significant antioxidant activity against DPPH radical. The total antioxidant activity was similar between the *Ilex paraguariensis* extracts and ascorbic acid, however, there was no difference between the extracts. **CONCLUSION**- The ability of extracts inhibit DPPH radical predicts their antioxidant capacity.

**WORD KEYS:** Antioxidant, Phenolics, DPPH, Yerba-mate

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