Chemical Composition and Antioxidant Activity of *Eugenia pyriformis* Cambess (uvaia)

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Palavras Chave: Polyphenols, Uvaia, Eugenia pyriformis*, DPPH, TBARS, TAR.*

Introdução

Fruit metabolites and their possible effects on human health are attracting increasing interest. Consumers, who are also increasingly aware of diet-related health problems, are demanding complementary medicine that are expected to be safe and health promoting.

Moreover, such fruits may contain compounds with functional properties against human diseases like polyphenolic compounds, which may act as natural antioxidants in our diet. They have been known to inhibit lipid peroxidation, to scavenge free radicals, to chelate iron and copper ions, and to alter cell signaling pathways[1].

Knowing the increasing search for complementary medicine with antioxidant action against free radicals, the objective of this study was to evaluate the potencial antioxidant of the hexane and the ethanolic fractions, as well as of the total extract of *uvaia* (*Eugenia pyriformis* Cambess), and to verify the phenolic compounds concentration[2] of these fruit.

Uvaia extracts were evaluated for radical trapping antioxidant potential (TRAP) total antioxidant reactivity (TAR) and thiobarbituric acid-reactive substances (TBA-RS). Results are expressed as nmol TBARS or Trolox/mg protein[3,4]. Data were analyzed by one-way analysis of variance (ANOVA) followed by the Duncan multiple range test when the F-value was significant (P <0.05).

Resultados e Discussão

Maximum values for total phenolics was 480 mgGAE/g. In this study, all flavonoids, and nonflavonoid phenolic compounds are estimated in this parameter.

Compared to the reference antioxidant, extracts possess similar or slightly lower radical scavenging activity in all test (figures 1-3).

Phytochemical studies have reported the occurrence of carotenoids in uvaia extract[1]. These data suggest that the antioxidant effect of the extracts may be due to the presence of carotenoids (hexane fraction) and polyphenolic compounds (ethanolic fraction), in combination.

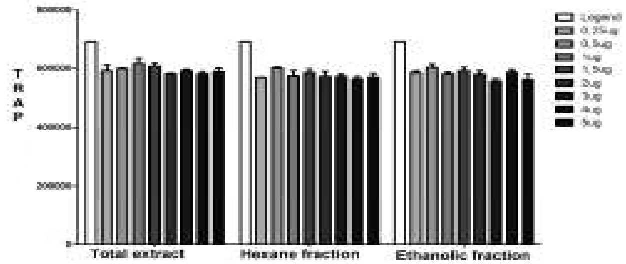

Figura 1. Radical trapping antioxidant potential

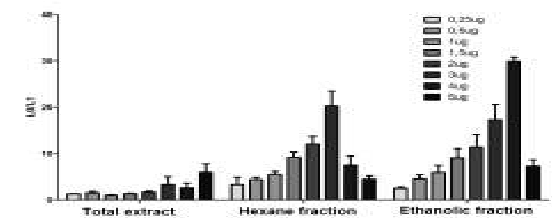

Figura 2. Total antioxidant reactivity

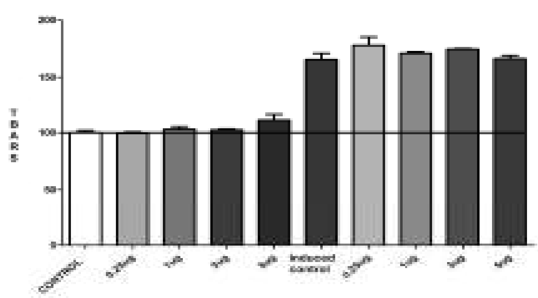

Figura 3. Thiobarbituric acid-reactive substances

Conclusões

This might be useful information from the point of view of identifying foods that are rich in these functional metabolites for the development of *pharmafood* products and additives with appropriate antioxidant properties.

Agradecimentos

CNPq, EMBRAPA.

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