Development of a fictional beverage from coffee pericarp and roasted coffee blends of *Coffea arabica*

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During de-pulping, coffee pulp is produced as a byproduct. Although the coffee pulp is rich in bioactive compounds with good antioxidant properties, it is usually disposed of as waste without considering the health benefits. Therefore, efforts have been made to prepare a ready to serve extract (tea) from *Coffea arabica* to evaluate the antioxidant activity, flavonoid content and pH. The beverage was prepared at three fermentation times: 12 hours, 18 hours and 24 hours, by combining pulp and seed powder in 04 proportions as: 5 g + 0 g, 4.5 g + 0.5 g, 4.0 g + 1 g and 3.5 g + 1.5 g. These 12 treatments were replicated 4 times in a Completely Randomized Design (CRD) and were analysed as a two factor factorial. Each treatment combination was dissolved in 200 ml water and boiled on a hot plate. The prepared beverages were used to evaluate antioxidant activity, flavonoid content and pH. Results revealed that the antioxidant activity increased up to 18 h fermentation time and then decreased during 24 h fermentation. However, the pH decreased initially, and increased in 24 h fermentation. The decrease in antioxidant activity may be caused by a decrease in pH since the solution recorded higher acidity. Acidic pH values can cause phenolic compounds to become more stable; the protons can bind to DPPH thereby decreasing the antioxidant activity of the beverage. The decrease in pH value after fermentation may be due to the organic acids produced. In long fermentation the acetic acid formed would be used to stimulate the growth of yeast which could metabolize and produce alcohol and increase the pH.

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