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Evaluation of allelopathic and antioxidant activity of 32 Amazonian plants

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In this study, the allelopathic and antioxidant activity of 32 plant species from Tamshiyacu Tahuayo Communal Reserve were evaluated. For alelopathics was used fresh leaves and extracts methanolics were prepared and added to plates with pregerminated seeds of *Lactuca sativa* at different concentrations (0.1-50.0 mg/ml). It was determined the hypocotyl inhibition percentage. For the antioxidant evaluation, it was realized by means of the scanning of free radical of DPPH with the methanolic extracts of the dry leaves at different concentrations (0.1-50.0 mg/ml). The results indicate high percentages of allelopathic inhibition at six species (*Sapium sp., Xylopia enthami, Guatteria hyposericea, Tapirira guianensis, Virola surinamensis* and *Malouetia nauias*), achieving more than 50% and its effective concentration 50% (EC50) is at minimum 0.1 mg/ml. The chemical component of allelopathic activity responsible is due, according to the analysis of presence of phenols, anthocyanins, catechins and proantocianidoles. About antioxidant potential the results indicates that three species presented high values of inhibition percentage. They were *Virola sebifera, Caryocar glabrum and Tapirira guianensis*, had the highest percentage of inhibition of 62.75%, 74.25% and 57.40%. The chemical components varied as follows: Phenolics (11521.7-32181.7 mg/100 g), flavonoids (103.1-144.3 mg/100 g) and proanthocyanidins (0.063-0.177 mg/100 g).

Biography

Garcia de Sotero has obtained his Doctorate in Food Sciences at FCF-USP. She is the Principal Professor of National University of Peruvian Amazon (UNAP), Peru. She has published more than 15 papers in several scientific journals and coauthor of handbook of food chemistry analysis.

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