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Hydroethanolic extraction of bioactive compounds from açaí (Euterpe oleracea) genotypes

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The açai (Euterpe oleracea) a native fruit from the Brazilian Amazon, has in its composition important bioactive compounds, including anthocyanins and carotenoids associated with biological action beneficial to health. Increased consumption of this fruit has stimulated breeding programs in search of plants and fruit with higher productivity, and the evaluation of the content of bioactive compounds present in genotypes resulted in basic information for the selection of promising genotypes and the development of new cultivars with improved attributes. Furthermore, the use of a hydroethanolic solution for extraction of pigments is a good alternative for future applications in food products without use of methanol and acetone generally used as solvents for the extraction of anthocyanins and carotenoids. Bioactive compounds were extracted with hydroethanolic extracts (50%) acidified (0.1% HCl) of different genotypes of açaí obtained from Active Germplasm Bank of Embrapa Amazônia Oriental (Belém, Brazil) and were evaluated by HPLC. Anthocyanins identified were cyanidin 3-glucoside and cyaniding 3-rutinoside and carotenoids were lutein, zeaxanthin, acarotene and β-carotene. The genotypes L09P09, BRS-PAMISTA and L22P13 showed an increase of 42-86% in total anthocyanin content while the genotypes L04P16, L22P13, L09P09, BRS-PAMISTA, L11P09 and L06P13 showed an increase of 68-166% in total carotenoids content when compared with commercial sample of açaí. The results indicate that the breeding led to an increase of bioactive compounds and the use of a hydroethanolic solution (50%) acidified is a viable alternative to the extraction of anthocyanins and carotenoids.