Euterpe oleracea is a palm tree widely found in the Amazon region. The fruit color of the most popular variety changes from green to black during the ripening process. Açai berry has gained popularity due to its extremely high antioxidant capacity. This work aimed to evaluate the physical, chemical and bromatological characteristics of açai during stages of maturation and in four locations distant of 0, 50, 100 and 150 km from Belém (State of Pará, Brazil). The fruits were harvested between July and October 2009. The maturity stage of each sample was determined according to the definition used by Rogez et al., (2011). The fruit’s weight and color were determined, then the pH, color, acidity and dry matter (%) of the acai’s drink. Analysis of variance showed that there are significant differences (p < 0.001) in the weight of the fruit according to bunch, distance from the Belém, and maturity stage. During the ripening, the fruit’s weight increases 10.94%. The color characteristics were found consistent with the fruit and beverage’s visual appearance: the redness characteristic increases with maturation yield expressed in per Kg of fruits. Also the dry matter increases progressively with maturity stage. Furthermore, pH significantly (p < 0.001) diminished from 6.25 (1st stage) to 5.31 (11th stage) for fruits from Belém but not for the three other origins. These results implies in new concept of acai quality according to the origin of the fruits and in a best quality criteria for acai juice.