

Quality of purple passion fruit grown under organic and conventional management systems for industry usage

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Abstract: The passion fruit is a fruit of great commercial importance all over the world due to the nutritional characteristics and the benefits related to consumption. The postharvest quality of passion fruit (*Passiflora edulis* Sims), produced by organic and conventional systems, was compared based on the physicochemical characterization of the fruits. The fruits from the experimental area of Embrapa Agrobiology in Seropédica-RJ, were harvested in mature stage (totally purple coloration of the peel). In the evaluations, 20 fruits were used for each type of cultivation. The physicochemical evaluations analyzed were: total fresh mass (g); longitudinal and transverse diameter (mm); DL/DT; peel firmness (N); yield of constituent parts (%); soluble solids (°Brix); pH; titratable acidity (% citric acid); SS/AT and vitamin C (mg/100 g). The purple passion fruit under conventional cultivation presented higher average values for fresh mass (169.95 g), pulp extraction yield (39.53%), soluble solids (13.90 °Brix), titratable acidity (4.63%) and vitamin C (65.00 mg/ 100 g), while organic purple passion fruit had higher average values for peel firmness of 96.76 N, longitudinal diameter (76.91 mm) and pH (2.70). Fruits produced by the two types of cultivation did not show differences in the DL/DT and SS/AT of the fruits. Although there were differences in the characteristics of the fruits produced by the two cultivation systems, the studied fruits in this work were adequate for the industrialization with good quality attributes, aiming to meet the demands of the consumer market.

Keywords: *Passiflora edulis* Sims; organic and conventional cultivation; physicochemical characteristics; postharvest; soluble solids; Vitamin C.