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Chemical characterization of guava fruit produced in sub-middle of São Francisco Valley, Brazil

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Brazil is one of the main world producers of guava fruit. However, the expansion of consumer market is conditioned to fruit quality and improvement on postharvest conservation technologies. As other fruit of economic importance, guava is widely cultivated in irrigated areas in semi arid region, in Northeast Brazilian Region. In this region, quality attributes can be distinguished, recognizing that they are influenced by cultivars, soil and climatic conditions and cultural practices. For example, inappropriate management during harvest and postharvest time accelerate the senescence processes, affecting sensibly the quality and limiting the period for commercialization. The objective of this study was to evaluate chemical characteristics of the three main cultivars of guava fruit produced in Sub-middle of São Francisco Valley, Brazil: 'Paluma', 'Rica' and 'Pedro Sato'. Fruits were harvested on physiological maturity, in April 2009, from areas of commercial production located in Petrolina, Pernambuco State, Brazil. After harvest, fruits were divided in four replicates, being each one constituted by 20 fruits, totalizing 80 fruits per cultivar. They were maintained in ambient temperature (average values of $25.9 \pm 1.7^{\circ}\text{C}$ and $66 \pm 5\%$ R.H.) until complete the ripening. Fruits were evaluated for: soluble solids (SS) content, titratable acidity (TA), SS/TA ratio, pH, soluble sugars content and reducing sugars. Among the evaluated cultivars, 'Paluma' showed the highest soluble solids content (11.1 °Brix), titratable acidity (0.59% citric acid) and soluble sugars content (7.41 g.100 g⁻¹). The highest values for SS/TA ratio and reducing sugars were observed in 'Pedro Sato', showing values of 25.52 and 6.48 g.100 g⁻¹, respectively. In addition, pH changed from 3.92 to 4.25. Rica and Pedro Sato cultivars showed chemical characteristics similar to 'Paluma', the most produced cultivar in that region. So, it can be stimulated their cultivation with the goal of exploiting in natura fruit market and the agroindustrial processing. In a general way, all studied cultivars attend the quality patterns established by Ministry of

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Agriculture, Livestock and Food Supply for pulp of fruits and they can be commercialized for internal and external market.

Keywords: *Psidium guajava* L., cultivars, quality, postharvest physiology.

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