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Preference test to select different species and genotypes of passion fruit for juice formulation A.M.G.N. Mamede¹, A. Farah¹, A.G. Soares², D.G.C. Freitas*², E.J. Oliveira³

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Passion fruit (PF) is very appreciated among tropical fruits due its exotic flavour. In addition to its nutritional value, several functional properties related to the nervous system have been reported. The yellow PF (Passiflora edulis Sims f. Flavicarpa Deg.) is the most commonly cultivated species for production of fruit juices in Brazil. However, the use of other promising species with different sensory and bioactive characteristics such as sweet (Passiflora alata) and purple (Passiflora edulis f. edulis Sims) PF would be interesting for the production of exotic mixed juices. Therefore, the aim of this work was to evaluate the preference of EMBRAPA genotypes produced in Brazil and select the most appropriated for production of mixed juices. Genotypes of yellow PF (BRSGA, BGMJ18, BGML03) and purple PF (BGM022, BGM023), with acidic characteristics, were diluted in 35% of mineral water, sweetened with 7% sucrose and compared by preference ranking test, using 108 consumers. Results were analysed by Friedman test at 5% significance level. Genotypes of sweet PF (BGM004, BGM163), were diluted 2:1 (pulp:water), with no sugar, and compared by paired preference test, using 93 consumers. These results were analysed by two-tailed significance test. Results were considered significant when p≤0.05. In both experiments, samples were served at 8±2°C in individual booths, under white light. For samples characterization pH, titratable acidity and total soluble solids were determined. Genotypes BRSGA and BGM023 were preferred among the acidic pulps, with no significantly difference between them, with score rank of 380 and 361 respectively. The two preferred samples showed higher pH (3.13 and 3.19) and lower acidity (1.30 and 1.25g citric acid.100 g-1), respectively, suggesting the preference for less acidic samples. For sweet PF, BGM004 was the preferred genotype by 66.6% of participants, probably because of its high contents of total soluble solids (13.3°Brix) compared to BGM163 (12.4°Brix).

Keywords: passion fruit, juice, preference, species