FLAVOR CHARACTERIZATION OF RESISTANT BANANA CULTIVARS FROM ‘PRATA’ GROUP BY INSTRUMENTAL AND SENSORY ANALYSES

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Brazil is the fourth largest world banana producer, with more than 7 million ton/year. This production is almost entirely absorbed in the domestic market, given the importance of this fruit in the population’s diet. However, commercial cultivars are susceptible to Black Sigatoka disease, which may cause losses up to 100% in production. Embrapa is developing new resistant varieties, but before these materials are made available to producers is necessary that its flavor is evaluated. This work investigated the sensory and volatile profiles of 10 resistant hybrids from the Prata group, comparing them to its female genitors (Prata-Anã and Pacovan), not resistant. Fruits at full ripening stage were submitted to a flavor descriptive analysis by a trained panel, which generated 6 aroma, 2 flavor and 2 taste descriptors. Headspace volatile analyses were performed in the same material. Compounds were trapped by SPME and analyzed by GC-MS. Multivariate analysis of data was performed using descriptors intensity and chromatogram peak areas of most important odor-active compounds, chosen from a previous work on Prata Anã. The non-resistant varieties and most of their hybrids showed similar but poor volatile profiles and were characterized by descriptors ‘pungent aroma’, ‘green aroma’ and ‘green flavor’. FHIA02 and FHIA18 (hybrids of Prata Anã) presented high amounts of isoamyl, isobutyl and hexyl acetates which were associated to ‘ripe banana’ aroma and flavor descriptors. Cultivar Japira (hybrid of Pacovan) showed the richest profile, with higher amounts of almost all compounds, mainly amyl and isoamyl esters with sweet aroma notes.