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## Aroma Profile of different genotypes of Umbu (*Spondias tuberosa* Arruda Camara) fruits

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### Abstract

The umbuzeiro (*Spondias tuberosa* Arruda Camara) belongs to the *Anacardiaceae* family and is native to the Caatinga biome region of Brazil. The fruit, known as umbu, has good appearance and exotic flavor, and is an important crop to small farmers. Fruit is usually consumed as fresh or used to produce pulp, jellies, sweets, ice cream and drinks. The Brazilian Agricultural Research Corporation (EMBRAPA), located in Petrolina, PE, has recently launched commercial cultivars of umbuzeiros, BRS48, BRS52, BRS55 and BRS68, which have high productivity and fruit size. The objective of this study was to determine the volatile profiles of the new umbu cultivars, BRS48, BRS52, BRS55 and BRS68, harvested at ripe stage of maturity. A total of 31 volatile organic compounds were identified. The chemical class of compounds found in the largest concentrations was of terpenes (17 compounds), followed by aldehydes (7 compounds), esters (6 compounds) and ketones (1 compound). The main compounds identified were limonene,  $\beta$ -myrcene and ethyl butanoate which were present in 4 genotypes, but their respective areas were different between the samples. The limonene presented largest area (180.81x106 a.u.) in the BRS48 sample and  $\beta$ -myrcene was the most representative (350.33x106 a.u.) in sample BRS68. This variation in relation to the volatile compounds can be characterized to their specific genotype in their ripe stage of umbu fruits.

**Keywords:** Genotypes, maturity stage, SBSE, *Spondias tuberosa*, volatiles profile