Characterization of volatile compounds from Murici fruit (*Byrsonima crassifolia*) by SPME/GC/MS


Murici fruit (*Byrsonima crassifolia*) is appreciated for its sensory attractiveness, specially its remarkable aroma and flavor, as well as its antioxidant and pharmacological activities. It is mainly used as part of cold and frozen food. Studies on the aroma of exotic fruits are potentially relevant to the horticulture and food industry due to the demand of domestic and foreign market for exotic flavors. Fruits were analyzed in three stages of maturation, ripe, intermediate and green, in a simple randomized design. The volatile compounds were extracted from 2 g of samples by SPME, using a Carboxen/Polydimethilsiloxane 65 µm fiber and analyzed for GC/MS. The initial temperature of the column was 40 °C and was increased until 200 °C, during 40 minutes. Forty, forty-one and forty-five compounds were identified in green, intermediate and ripe fruits, respectively, in these proportions: hydrocarbon- 28%, 24%, 22%; alcohol- 23%, 22%, 18%; aldehyde- 20%, 20%, 16%; ester- 13% 15%, 20%; ketone- 5%, 10%, 11%; carboxylic acid- 5%, 2%, 4%; nitrogen compounds, 8%, 7%, 9%. There was a slight decrease in the hydrocarbons, alcohols and aldehydes and increase in ketones, esters and nitrogen compounds over the ripening. Some of those compounds are described promoting aroma as lemon, green, rose, citrus peel-like, fatty, and fruity. This work may be useful to futures studies related to flavor of exotic fruits. Acknowledgment: CNPq, CAPES e FAPEMIG (Brazilian sponsors).