The aroma is one of the most important features of fruits that determine the export demanding of tropical fruits. So, the identification of volatile compounds that determines the uniqueness of the fruit’s flavor is essential. The fruits of *Pouteria ramiflora* have an intense aroma and they are known by your medicinal, antioxidant, anti-inflammatory and antifungal properties. However, there are not scientific studies enough about the nutritional, sensory and functional potential of them. Fruits were analyzed in two stages of maturation, ripe and green, in a simple randomized study. 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. Seventy-three compounds were identified in each maturation stage. The volatile compounds analyzed, in similar proportions between both maturation stages, were classified: alcohols 18%, ketones 14%, carboxylic acids 4%, aldehydes 8%, other 8%. However, differences were observed in hydrocarbons, 41.6% and 20.5% and esters, 9.7% and 26% in the ripe and green stages respectively, suggesting the conversion hydrocarbons/esters, during the ripening. Volatile proof of *Pouteria ramiflora*, was firstly characterized in this work. It can be used in further studies about the aroma and flavor of that fruit.