Title	Fatty acid composition of phospholipids in mesocarp of cherimoya fruit during ripening
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Abstract

Mature-green cherimoya (*Annona cherimola* Mill.) fruits were stored for 6 days at 22 °C. The analysis of the lipid classes in mesocarp tissue of mature-green and senescing fruits showed that the senescence of cherimoya was characterized by a decrease of phospholipid content. The fatty acid composition of the mesocarp phospholipids was studied in fruits at harvest, on day 3 and 6. Twenty different fatty acids were identified. The C16:0, C18:0, C18:1, C18:2*n*—6 and C18:3*n*—3 fatty acids clearly were the most abundant fatty acids and the C18 family comprised more than 50% of total fatty acids content. Major variation in the relative composition of mesocarp phospholipid fatty acids were observed at the pre-climacteric stage. These changes did not modify the unsaturation index of the membrane but increased the unsaturation level for C18 fatty acids class. In senescing fruit, a decrease in all unsaturation indexes calculated was found. The results indicated that the modification of the relative quantity of specific polyunsaturated fatty acids in phospholipids was more relevant than the total content of fatty acids for the adaptation of mesocarp membranes to ripening and senescence processes in cherimoya fruit.