

Title Changes in sugars, organic acids, fatty acid and amino acids during storage of Yali Pear (*Pyrus bertschneideri* Reld)

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Abstract

Introduction: Yali pear (*Pyrus bertschneideri* Reld) belongs to super white pear, and has been grown in China for more than 2000 years. It is popular with consumers for its unique fragrance, subtle aroma, sweetness, and crispness. It has good eating quality with few stone cells. It matures in middle and late September, and is typically harvested at minimum soluble solids concentration of 10°Brix-12°Brix. As far as we know, there are no data in the literature about the stored Yali pear. The objective of this research was to study the changes of sugars, organic acids, fatty acids, and amino acids of Yali pear firstly and provide basic information and evaluate the quality and determine nutritive value of this pear variety during the whole storage in maintaining fruit quality and. **Materials and Methods:** The contents of sugars, organic acids, fatty acids and amino acids of Yali pear fruit were determined during 1, 2, 3, 4, 5 months storage. **Results and Discussion:** It was found that Yali pear fruit contains important amounts of flavouring sugars, organic acids, fatty acids and amino acids that might play a significant role in its flavour. Fructose was the dominant sugar, followed by glucose and sucrose. With increasing storage time, sucrose levels decreased. However fructose and glucose levels changed not remarkable. Malic acid and citric acid were identified as the principal organic acids and their levels varied remarkable during storage. C16:0, C18:0, C18:1, C18:2 and C18:3 fatty acids were clearly the most abundant fatty acids, and the C18 family comprised more than 70% of the total fatty acids content. Asparagine and Serine were the principal amino acids and increased during storage. In our investigated time, the cultivar retains good quality during storage.