Title	Changes in the volatile compounds and chemical and physical properties of Yali pear (*Pyrus bertschneideri* Reld) during storage
Author	Ji Luan Chen, Shijie Yan, Zuoshan Feng, Lixia Xiao and Xiao Song Hu
Citation	Food Chemistry Volume 97, Issue 2, July 2006, Pages 248-255
Keyword	Pyrus bertschneideri Reld; Yali pear; Volatile compounds; GC-olfactometry; Chemical and physical properties; Storage; Solid phase microextraction (SPME)

Abstract

Volatiles from stored Yali pear (*Pyrus bertschneideri* Reld) were studied using high-resolution gas chromatography and the solid-phase microextraction (SPME) method of gas chromatography/mass spectrometry (GC/MS). The dominant components were ethyl butanoate, ethyl hexanoate, α-farnesene, hexanal, ethyl acetate, hexyl acetate, ethanol and so on. By using GC-olfactometry, it was demonstrated that the volatile compounds from SPME were responsible for the aroma of Yali pear. The levels of sugars, organic acids, and phenolic acids in Yali pear were investigated using high-performance liquid chromatography. Fructose was the dominant sugar, followed by glucose and sucrose. With increasing storage time, sucrose levels decreased, however fructose and glucose levels did not changed remarkably. There was a slight decrease in flesh firmness during storage. The general soluble solids concentration, slightly decreased after 5 months storage. Some aroma volatile components increased during storage, while others decreased, especially the esters. The organic acids and phenolic acids also changed. Yali pear flavor was affected by changes in the levels of volatile compounds, and chemical and physical properties.