

**Title** Changes and distribution of aroma volatile compounds from pineapple fruit during postharvest storage

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### **Abstract**

The aroma volatile compounds in both pulp and core of Tainong 17 pineapple fruit were extracted by head-space solid-phase microextraction (HS-SPME) and analyzed by gas chromatograph-mass spectrophotometer (GC-MS) during postharvest storage (at day 1, 6, 9 after harvest) at 25±1°C. Eighteen volatile compounds were identified, in which, esters were the most dominant, and butanoic acid methyl ester, hexanoic acid methyl ester and 3-(methylthio) propanoic acid methyl ester were all in both pulp and core. During the postharvest storage, the total content of esters increased from 65.47% to 81.18% in the pulp, but increased at the beginning and then decreased later in the core. At day 1, the content of hexanoic acid methyl ester was highest in all compounds of the pulp and core, followed by butanoic acid methyl ester in the pulp. At day 6, butanoic acid methyl ester was the most dominant and followed by hexanoic acid methyl ester and octanoic acid methyl ester in all compounds of the pulp, while hexanoic acid methyl ester was the highest and followed by octanoic acid methyl ester and butanoic acid methyl ester in the core. At day 9, hexanoic acid methyl ester and methyl-2-Methylbutyrate were the main aroma compounds in the pulp, while butanoic acid methyl ester and hexanoic acid methyl ester in the core. The content of esters increased to the maximum in the pulp (81.18%), but the minimum in the core (47.13%) at day 9, which had been considered as important class of aroma volatile compounds in not only the pulp but also the core.