



## 4.11 Analysis of Strawberry Fragrances - GCMS

### •Explanation

Strawberry fragrance components consist of fatty acid methyl esters from C2 to C6. Old and new varieties of marketed strawberries were compared and the correlation between type and fragrance studied.

Normally, steam distillation or the headspace method is used for pretreatment of fragrance components; however, sometimes problems occur with the heating process. In the case of strawberries, heat destroys cells and release large amounts of special esters that are sometimes mistaken for fragrance components.

Here, the Chrompack CP4010 + GCMS system (TCT + GCMS) was used to dry-air purge the sample without heating to enable optimum measurement of strawberry fragrances.

### •Analytical Conditions

Instrument : GCMS-QP5000  
Column : DB-624 0.25mm × 60m df = 1.4µm  
Col. Temp. : 40°C(5min) – 230°C(5°C/min)(5min)  
I/F Temp. : 230°C  
Carrier gas : He(100kPa)  
– TCT –  
Instrument : CP4010(TCT mode)  
Sample amount : 10g (room temperature)  
Trap tube : Tenax TA  
Pre-cool : –150°C, 5min  
Pre-flush : 50°C, 1min  
Thermal desorption : 250°C, 10min, 20mL/min

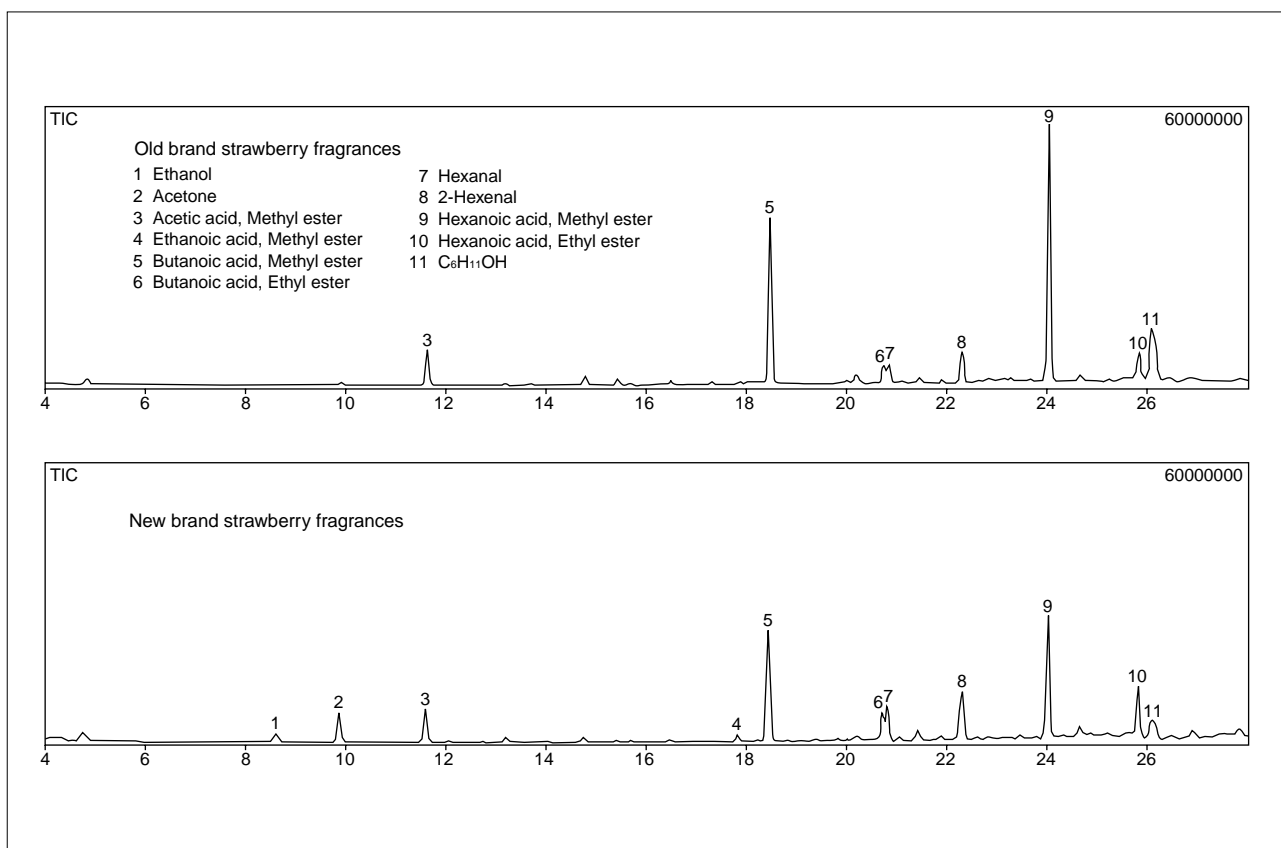


Fig. 4.11.1 TIC chromatogram of strawberry fragrance components (upper: old brand, lower: new brand)