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技术交流

两种甜樱桃果实挥发性成分的HS-SPME-GC/MS分析

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摘要

采用顶空固相微萃取（HS-SPME）技术提取“红灯”和“巨红13-38”两种甜樱桃成熟期果实的挥发性成分，经气相色谱-质谱（GC/MS）联用仪测定，比较分析两种甜樱桃果实的香气成分变化。结果表明：两种甜樱桃中共检测出68种香气成分，其中，在“红灯”甜樱桃中检测出29种香气成分，主要为醛类、醇类和酯类，分别占鉴定物质总量的34.25%、32.00% 和30.77%；在“巨红”甜樱桃中检测出50种香气成分，主要为萜类、醇类、脂类化合物，分别占鉴定物质总量的78.41%、10.47% 和5.29%。“红灯”和“巨红”香气种类及含量存在很大差异，两种甜樱桃果实只有10种共有香气成分，“红灯”中相对含量较高的物质是苯甲醛、苯甲醇、乙酸乙酯和(*E*)-2-己烯醇，可作为其特征香气；巨红中相对含量较高的物质为石竹烯，达41.8%，其次为顺-氧化芳樟醇和葎草烯。

关键词

甜樱桃 香气成分 顶空固相微萃取（HS-SPME） 气相色谱-质谱(GC/MS)

分类号

扩展功能

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Analysis of Volatile Components in Sweet Cherry Fruit by HS-SPME-GC/MS

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Abstract

Volatile components in ‘Hongdeng’ and ‘Juhong’ sweet cherry fruits at ripe stage were collected using head space-solid phase micro-extraction (HS-SPME), and analyzed by gas chromatography-mass spectrometry (GC/MS). 69 compounds are isolated and identified from the sample extracts. 29 components in ‘Hongdeng’ sweet cherry fruits are identified， among them aldehydes, esters and alcohols are the major components in the sample extracts， account for 34.25%,32.00% and 30.77% of the total volatile components identified, respectively. 50 components in ‘Juhong’are identified. Among them terpene and alcohols are predominant flavor volatiles, account for 78.41% and 10.47%, respectively. 10 same volatile components are present in both sweet cherry cultivars. It is also found that ‘Hongdeng’and ‘Juhong13-38’have 19 and 40 unique components, respectively. The volatile components in two cherry fruits were constantly changing in the type and content. Benzaldehyde, benzyl alcohol, ethyl acetate and (*E*)-2-Hexenol are predominant flavor volatiles in ‘Hongdeng’ sweet cherry fruits. The relative contents of *β*-caryophyllene is the highest in ‘Juhong13-38’cherry fruits.

Key words cherry _ volatile components _ head space-scolid phase micro-extracti on（HS-SPME） _ gas chromatography-mass spectrometry（GC/MS）

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