

Differentiation of Fresh and Processed Fruit Juices using Volatile Composition

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Abundance ($\times 10^6$)

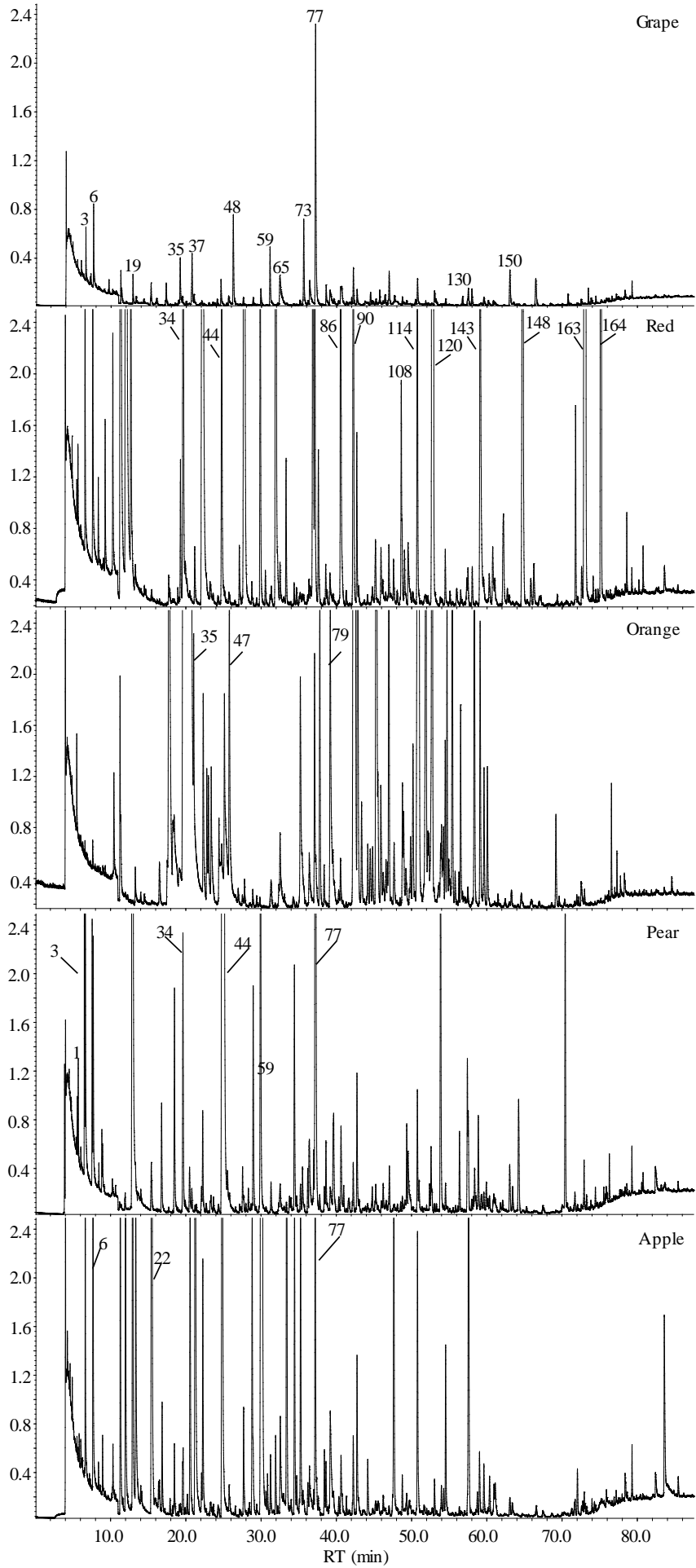


Figure S1: Total ion chromatograms obtained by HS-SPMEDVB/CAR/PDMS/GC-qMS analysis of processed fruit juices (for identification of peak numbers see **Table 1**).

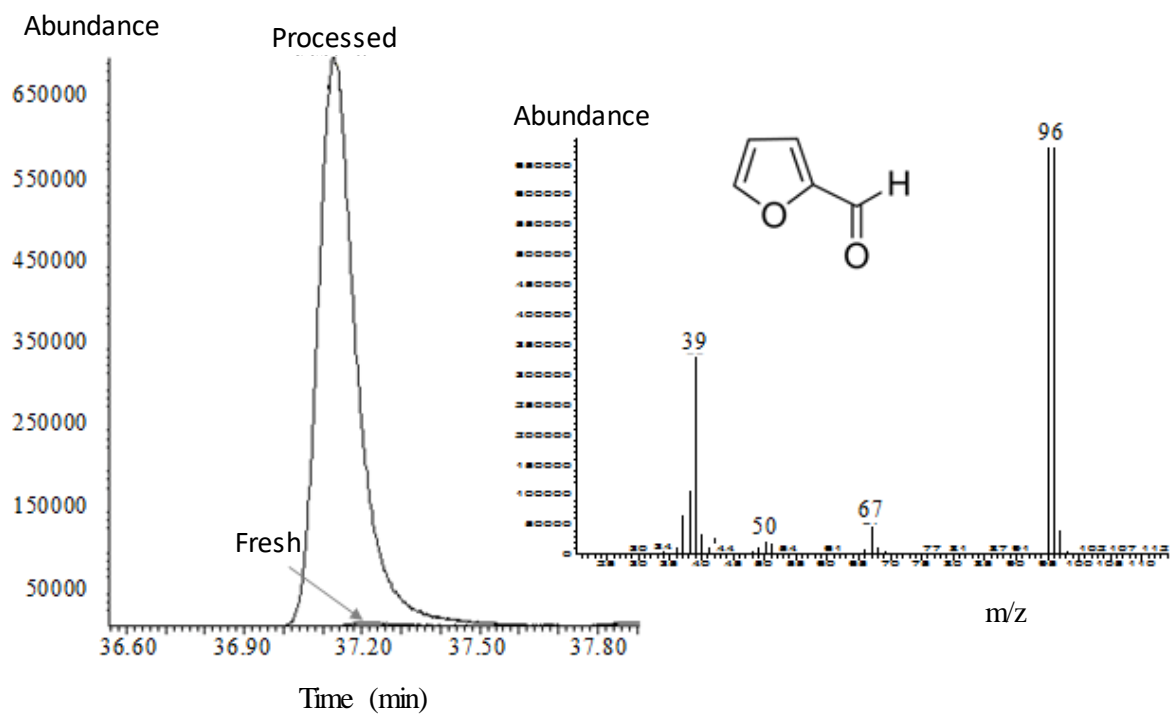


Figure S2: Overload of GC-qMS chromatograms (enlarged part of the chromatograms of Figure 1) showing the comparison of the typical profile of 2-furfural identified in fresh and processed fruit

Table S1: Common volatile organic compounds (VOCs) identified in fresh and processed fruit juices.

Chemical groups	VOCs
Esters	methyl acetate, ethyl acetate, ethyl hexanoate, hexyl acetate, ethyl 2-hexenoate, ethyl octanoate, ethyl 9-decenoate, 2-phenylethyl acetate
Alcohols	ethanol, 1-propanol, 3-methyl-1-butanol, 2-heptanol, 3-hexen-1-ol isomer, 1-octen-1-ol, 2-ethyl-1-hexanol, 1-octanol, phenylethyl alcohol
Carbonyl compounds	2-hexenal isomer, nonanal, methional, decanal, benzaldehyde
Terpenoids	limonene, camphor, linalool, β -ciclocitral, citral, β -terpeniol, α -terpineol, perillaldehyde, β -damascenone
Volatile phenols	eugenol
Acids	acetic acid, hexanoic acid, octanoic acid
Furanic compounds	2-furfural

Table S2: Predominant VOCs in fresh and processed fruit juices analyzed using HS-SPME/GC-MS methodology

Juice Samples		VOCs predominant
Grape	Fresh	Ethanol, dihydrolinalool, linalool, methyl salicylate, β -terpineol
	Processed	2-Furfural, ethanol, dihydrolinalool, 2-heptanol, methyl salicylate
Red	Fresh	Methyl hexanoate, hexyl acetate, linalool, ethyl 3-hydroxybutanoate, Ethyl decanoate,
	Processed	Methyl hexanoate, linalool, hexyl acetate, ethyl 9-decenoate, 2-furfural
Orange	Fresh	Limonene, ethyl 3-hydroxybutanoate, ethyl 9-decenoate, germacrene D, geranyl acetone isomer
	Processed	Limonene, linalool, ethyl 3-hydroxybutanoate, 2-furfural, octanal
Pear	Fresh	Hexyl acetate, ethyl acetate, ethanol, benzyl propanoate, 2-heptanol
	Processed	Hexyl acetate, 2-heptanol, ethyl acetate, 2-furfural, methyl hexanoate
Apple	Fresh	3-Methylbutanol acetate, α -farnesene, hexyl acetate, ethyl 9-decenoate, ethyl acetate
	Processed	3-Methylbutanol acetate, butyl acetate, 2-furfural, ethanol, ethyl acetate