



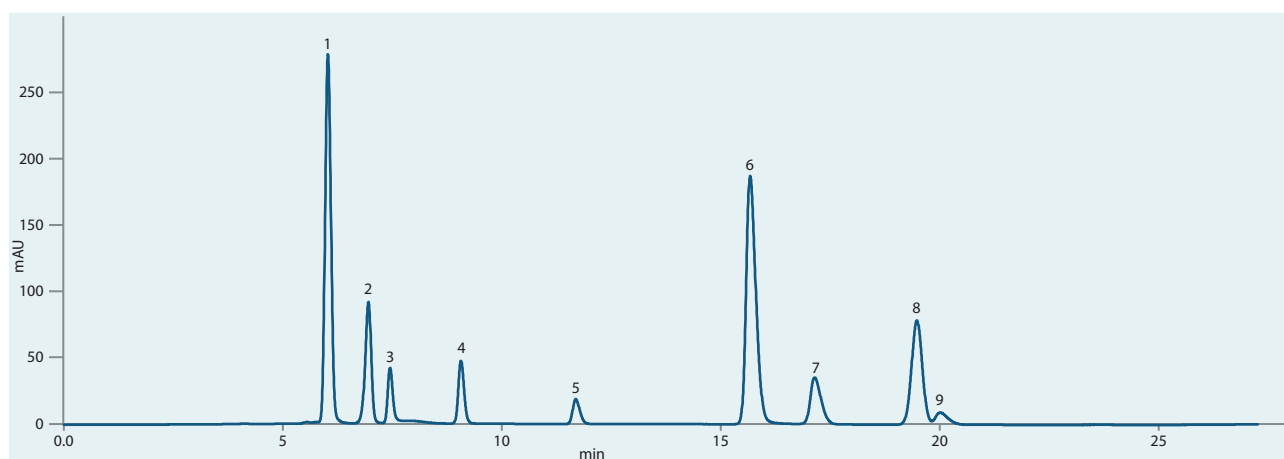
ORGANIC ACIDS

INTRODUCTION

The identification and quantitative analysis of major organic acids in fruits and vegetables is considered very important for the food and beverage industry. Organic acids play a significant role thanks to their influence on flavour, stability and keeping quality. Organic acids are generated during the aerobic oxidation of carbohydrates, proteins and fats in most biological systems.

Substance: **Oxalic acid**, CAS number 144-62-7
Tartaric acid, CAS number 87-69-4
 [L-(+) form], 147-71-7 [D-(-) form],
 147-73-9 [meso form]
Formic acid, CAS number 64-18-6
(±)-Malic Acid, CAS number 617-48-1

Acetic acid, CAS number 64-19-7
Maleic acid, CAS number 110-16-7
Citric acid, CAS number 77-92-9
Fumaric acid, CAS number 110-17-8
Succinic acid, CAS number 110-15-6



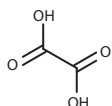
Analysis of organic acids (standard) ARION® column

Column	ARION® Polar C18, 5 µm
Dimensions	250 mm × 4.6 mm
Part number	ARI-5721-LM46
Mobile phase	20 mM NaH ₂ PO ₄ , pH 2.7 Isocratic elution
Flow rate	0.5 ml/min
Temperature	30 °C
Detection	UV @209nm
Analytes	1. Oxalic acid (0.714 mg/l) 2. Tartaric acid (0.1 mg/l) 3. Formic acid (0.677 mg/l) 4. Malic acid (0.1 mg/l) 5. Acetic acid (0.1 mg/l) 6. Maleic acid (0.01 mg/l) 7. Citric acid (0.1 mg/l) 8. Fumaric acid (0.004 mg/l) 9. Succinic acid (0.729 mg/l)

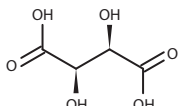


ORGANIC ACIDS

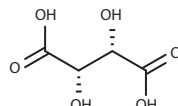
Formula:



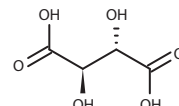
Oxalic acid



L-(+)-Tartaric acid



D-(-)-Tartaric acid



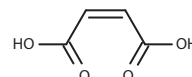
Meso-Tartaric acid



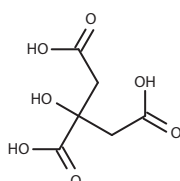
Formic acid



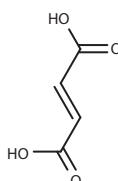
Acetic acid



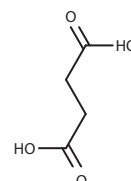
Maleic acid



Citric acid



Fumaric acid



Succinic acid

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