

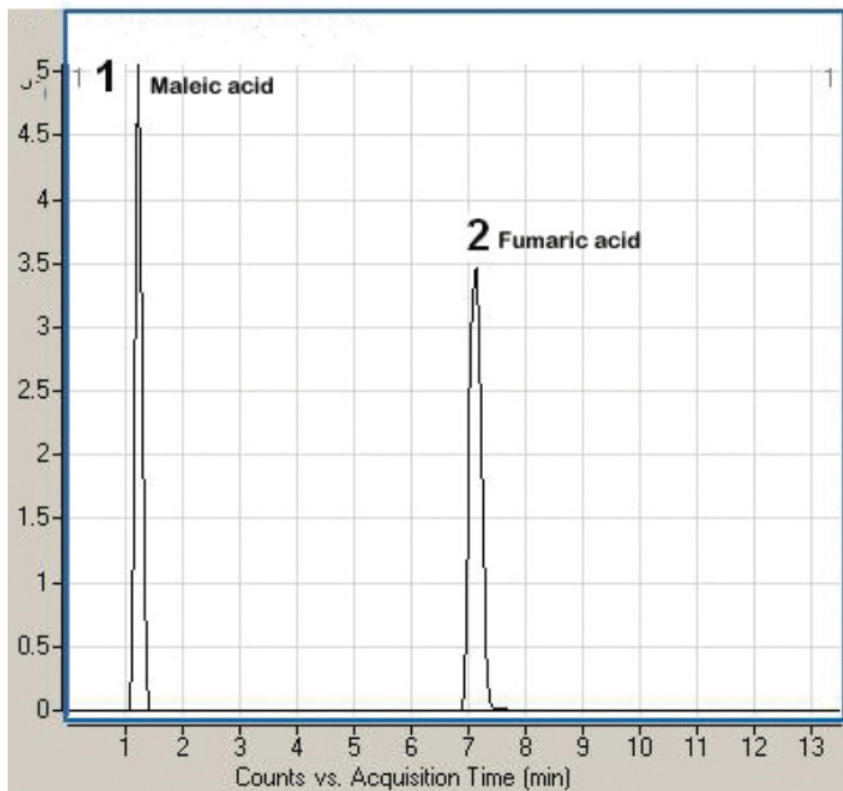


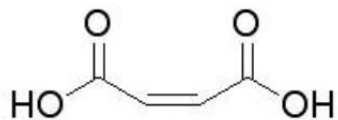
## Maleic & Fumaric Acids Analyzed with LCMS - AppNote

### Isobaric Organic Acids Separated and Identified

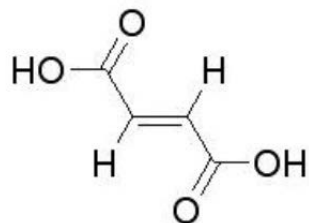
Low molecular mass, Isobaric Acids were Retained, Separated and Identified in this simple Method. The Separation of the two compounds with identical mass is necessary in order to determine which of the acids is present in the sample matrix by the Mass Spectrometer.

The Method presented was found to be superior to other classical Assays and HPLC Methods, and to be a good choice for the analysis of these compounds.





**1. Maleic acid**



**2. Fumaric acid**

### Peaks:

1. Maleic Acid 115.0031 m/z (M-H)<sup>-</sup>
2. Fumaric Acid 115.0031 m/z (M-H)<sup>-</sup>

### Method Conditions

**Column:** Cogent Diamond Hydride™, 4μm, 100Å

**Catalog No.:** 70000-15P-2

**Dimensions:** 2.1 x 150mm

#### Mobile Phase:

A: DI Water / 0.1% Ammonium Formate

B: 90% Acetonitrile / 10% DI Water / 0.1% Ammonium Formate



**Gradient:**

Time (minutes)	%B
0	90
3	90
6	70
7	70
7.1	30
8	30
8.1	90
10	90

**Flow rate:** 0.4mL / minute

**Detection:** ESI - neg - Agilent 6210 MSD TOF Mass spectrometer

**Sample Preparation:** Sample mixture was prepared in 50:50 DI Water / Acetonitrile

**Notes:** Fumaric and Maleic Acids are impurities found in Tartaric and Malic Acids and their amounts are officially limited by the FDA.

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**Attachment**

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