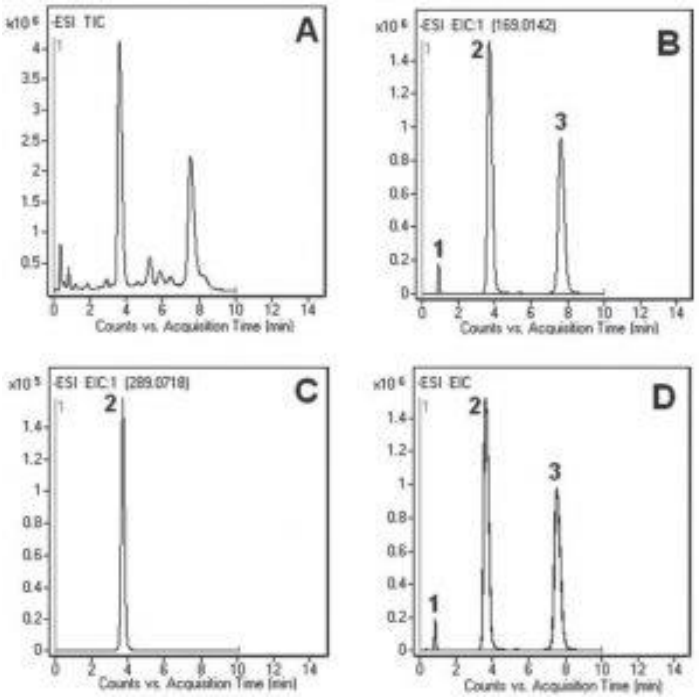
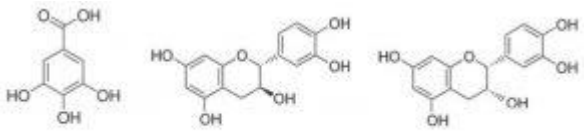
Polyphenols in Grape Seed Extract Analyzed with LCMS - AppNote

Separation of Gallic Acid, Catechin, and Epicatechin

This Method was applied to the determination of Phenolics in a grape seed extract. From *Figure B*, it can be determined that the Aqueous extract contains a high amount of Gallic Acid, Catechin and Epicatechin.





1. Gallic acid 2. Catechin 3. Eipcatechin

Peaks:

1. Gallic Acid 169.0142 m/z (M-H)– , RT=0.862 min
2. Catechin 289.0718 m/z (M-H)– , RT=3.739 min
3. Epicatechin 289.0718 m/z (M-H)– , RT=7.626 min

Method Conditions

Column: Cogent Bidentate C18™, 4µm, 100Å
Catalog No.: 40018-05P-2
Dimensions: 2.1 x 50mm
Mobile Phase:
A: DI Water / 0.1% Formic Acid

B: Methanol / 0.1% Formic Acid

Gradient:

Time *(minutes)*	%B
0	10
5	15
7	15
8	10

Injection vol.: 1µL

Flow rate: 0.4mL / minute

Detection: ESI – NEG - Agilent 6210 MSD TOF Mass Spectrometer

Sample Preparation: Grape seed extract tablet was crushed and extracted with DI Water at 40°C. Before injection, sample solution was filtered using a 0.45µm Nylon Syringe Filter (MicroSolv Tech Corp.).

t_0: 0.4 minutes

Note: *Grape seed extracts have a high content of phenolic compounds, such as Gallic Acid, Catechin, Epicatechin and Procyanidins. They have been the matter of intense investigations with respect to their potentially beneficial effects on human health. Phenolic compounds are secondary plant metabolites and they play an important role in plant growth, reproduction, and protection against pathogens and predators. This data was presented at the American Society of Pharmacognosy Annual Meeting and Exhibition, July 30 – August 3, 2011, San Diego, California.*

COGENT HPLC Columns™

Attachment

No 138 Polyphenols in Grape Seed Extract Analyzed with LCMS pdf 0.3 Mb Download File

MicroSolv Technology Corporation
9158 Industrial Blvd. NE, Leland, NC 28451
Tel: (732) 380-8900
Fax: (910) 769-9435
Email: customers@mtc-usa.com
Website: www.mtc-usa.com