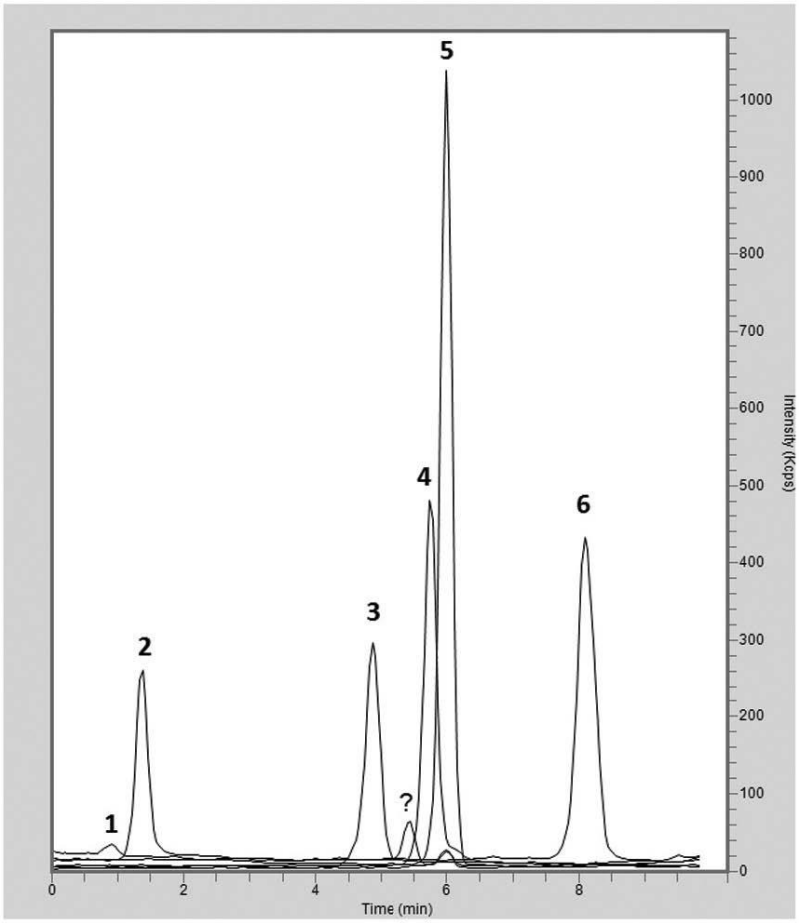
Phenolic Compound Determination with LCMS - AppNote

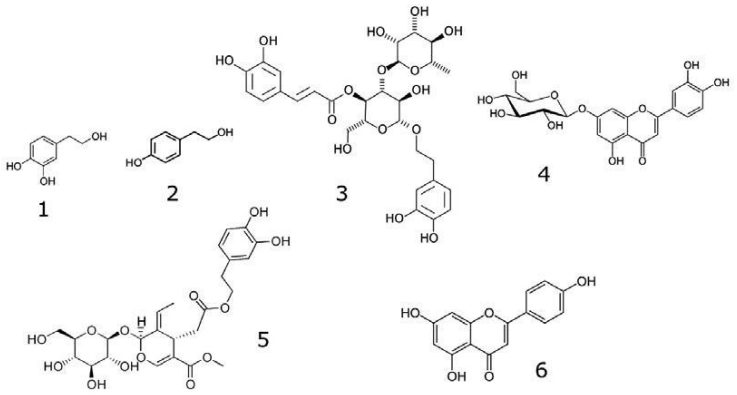
Compounds in Olive Leaves Extract

Click *HERE* for Column Ordering Information.

A commercial Olive Extract was analyzed using the Cogent Phenyl Hydride Column. Only one Oleuropein Peak was detected and it was Symmetrical and well Retained. The results were reproducible (%RSD = 0.2 for Retention Times).

According to the literature [1] the extract from Olive leaves should contain additional compounds. To confirm that the extract doesn't contain these compounds, spiked Olive leaves extract was analyzed. All these reported, Phenolic compounds were detected and Separated.





Peaks:

1. Hydroxytyrosol m/z 177 [M + Na]+
2. Tyrosol m/z 161 [M + Na]+
3. Verbascoside m/z 647 [M + Na]+
4. Luteolin-7-O-glucoside m/z 449 [M + H]+
5. Oleuropein m/z 563 [M + Na]+
6. Apigenin m/z 449 [M + H]+

Not present: Peonidin 3-O-glucoside 463 m/z [M+]

Method Conditions

Column: Cogent Phenyl Hydride™, 4µm, 100Å
Catalog No.: 69020-05P-2
Dimensions: 2.1 x 50mm
Mobile Phase:
A: DI Water / 0.1% Formic Acid (v/v)

B: Acetonitrile / 0.1% Formic Acid (v/v)

Gradient:

Time *(minutes)*	%B
0	5
3	15
4	15
6	30
7	30
11	95
14	95
15	5

Post Time: 3 minutes

Injection vol.: 1µL

Flow rate: 0.4mL / minute

Detection: ESI – NEG - Perkin Elmer, Flexar SQ 300 Mass Spectrometer

Sample Preparation: Commercial Olive leaves extract was dissolved in DI Water and spiked at a concentration of 25ppm.

t_0: 0.4 minutes

[1] J.E. Hayes, P. Allen, N. Brunton, M.N. O'Grady, and J.P. Kerry, Food Chemistry, 126, (2011) 948–955

COGENT HPLC Columns™

Attachment

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