MICROSOLV TECHNOLOGY CORPORATION
HPLC Columns and Chromatography Accessories

SINCE 1992

Brazilian Tree Bark Analyzed with LCMS – AppNote

Identification of Quercetin, Rutin, and “Compound 1” in a Brazilian Tree Bark

Over one quarter of natural medicines have been discovered in rainforests, and therefore analytical study of the indigenous flora and fauna is necessary. The Amazonian rainforest in Brazil is the most biodiverse region in the world.

A Brazilian tree bark extract (Brownea Grandiceps) is analyzed by LCMS and three beneficial compounds were identified in the Extracted Ion Chromatograms (EIC)s.

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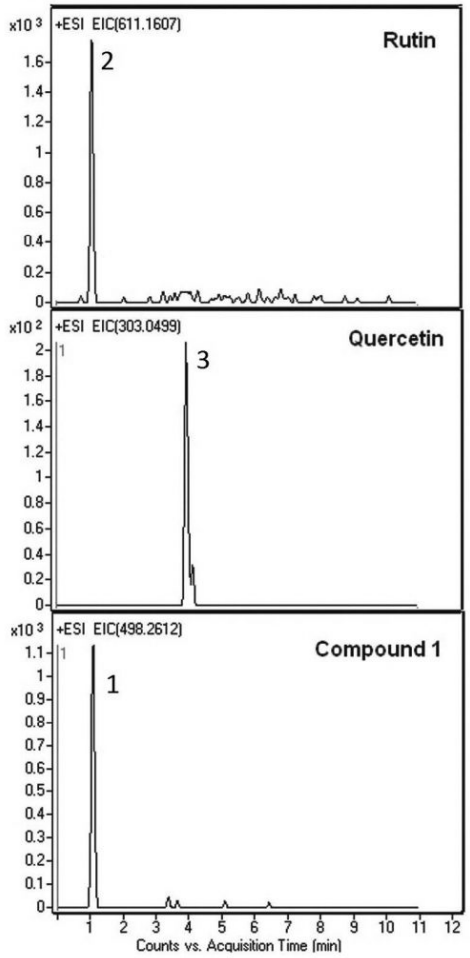
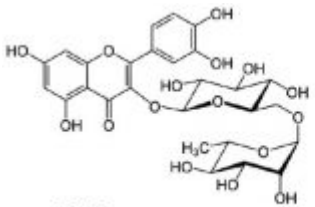
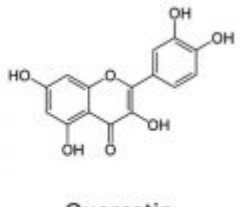




Rutin



Quercetin

Peaks:

1. (6-Beta-O-2',3'-Dihydrocinamonyl-12-Hydroxy-(13) 15-en-16,12-Olide-18-Cassaneoic Acid) m/z 498.2612 [M + H]+
2. Rutin m/z 611.1607 [M + H]+
3. Quercetin m/z 303.0499 [M + H]+

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

Time *(minutes)*	%B
0	80
1	10
5	10

6	80

Post Time: 3 minutes
Injection vol.: 1µL
Flow rate: 0.4mL / minute
Detection: ESI – POS – Agilent 6210 MSD TOF Mass Spectrometer
Sample Preparation: Two pieces of bark were boiled for 5 minutes in DI Water and then filtered with a 0.45µm Nylon Syringe Filter (MicroSolv Tech Corp.).
t_0: 0.9 minutes

Note: Preliminary research suggests that Quercetin may have Antiviral, Anti-Cancer, and Anti-Inflammatory properties. Likewise, Rutin has been reputed to have health benefits as well such as Anti-Oxidant properties, lowered risk of heart attack or stroke, and others.

Attachment

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