

Application Report 194

LC-MS Analysis of Catechins on Ascentis™ RP-Amide

Eight catechin compounds were analyzed on an Ascentis RP-Amide column with mass spectrometric detection. These compounds are found in green tea and have been reported to help prevent and treat a variety of illnesses.

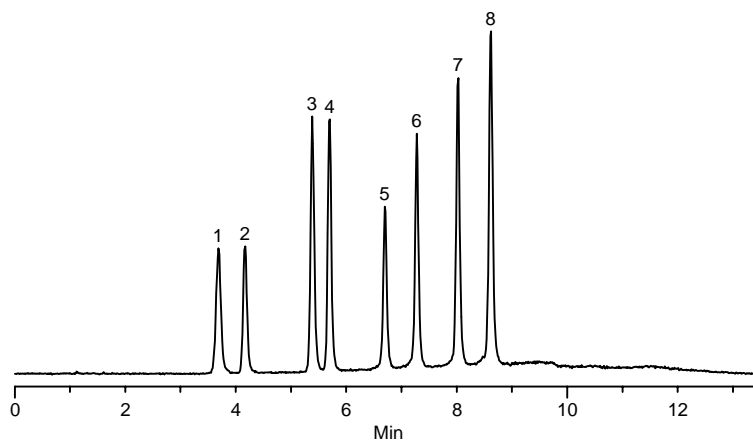
Key Words

catechin, epicatechin, epicatechin gallate, epigallocatechin, epigallocatechin gallate, galocatechin, galocatechin gallate, catechin gallate, G6657, G6782, 3371-27-5, 4233-96-9, 130405-40-2, 154-23-4, 490-46-0, 970-74-1, 1257-08-5, 989-51-5, nutraceuticals, LC-MS, Ascentis RP-Amide, 565324-U, green tea

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Acquisition System: W2790

Notebook Reference: 1548-14



G002723

Conditions

column: Ascentis RP-Amide, 15 cm x 4.6 mm I.D., 5 µm particles (565324-U)
mobile phase A: 10 mM ammonium formate (pH 3.0 with concentrated formic acid)
mobile phase B: acetonitrile
flow rate: 1 mL/min.
temp.: 35 °C
det.: MS, ESI (-) in selected ion recording (SIR) mode
injection: 10 µg/mL
sample: 10 µg/mL each in water:acetonitrile 1:1
gradient:

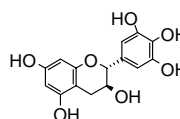
| Min. | %A | %B |
|------|----|----|
| 0 | 85 | 15 |
| 1 | 85 | 15 |
| 10 | 55 | 45 |
| 12 | 85 | 15 |

Peak IDs

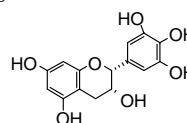
1. Galocatechin, m/z 305
2. Epigallocatechin, m/z 305
3. Catechin, m/z 289
4. Epicatechin, m/z 289
5. Epigallocatechin gallate, m/z 457
6. Galocatechin gallate, m/z 457
7. Epicatechin gallate, m/z 441
8. Catechin gallate, m/z 441

Structures

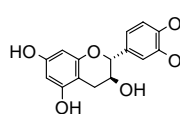
Galocatechin - G002729



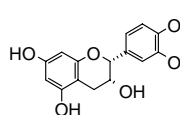
Epigallocatechin - G002727



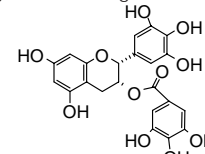
Catechin - G002724



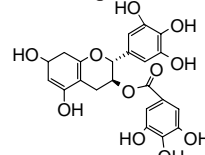
Epicatechin - G002725



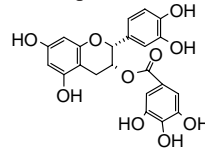
Epigallocatechin gallate - G002728



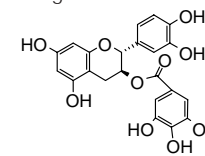
Galocatechin gallate - G002730



Epicatechin gallate - G002726



Catechin gallate - G002731



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