## FOOD / BEVERAGE

HALO



## **LC-MS Separation of Common Catechins Found in Tea**



Peak #	Compound	M/Z
1	Gallic Acid	169
2	Gallocatechin	305
3	Epigallocatechin	305
4	Catechin	289
5	Caffeine	195
6	Epicatechin	289
7	Epigallocatechin Gallate	457
8	Gallocatechin Gallate	457
9	Epicatechin Gallate	441
10	Catechin Gallate	441

## **TEST CONDITIONS:**

Column: HALO 90 Å LPH-C18 2 µm, 2.1 x1 00 mm Part Number: 91822-616 Mobile Phase A: Water, 0.2% Formic Acid (pH 2.45) Mobile Phase B: Acetonitrile, 0.2% Formic Acid Gradient: Time %B

Time	70E
0.0	10
1.0	10
6.0	21
7.0	21
3 mL/min	
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Flow Rate: 0.3 mL/min Pressure: 438 bar Temperature: 40 °C Detection: +/- ESI MS/MS Injection Volume: 2 µL Sample Solvent: Water MS System: Shimadzu 8040 LC System: Shimadzu Nexera X2

## **MS CONDITIONS:**

Nebulizer Gas Flow: 2 L/min DL Temperature: 250 °C Heat Block Temperature: 400 °C Drying Gas Flow: 10 L/min

Catechins belong to the subgroup of polyphenols called flavonoids. These compounds contain antioxidant properties and exist in food and medicinal plants, including tea. An LC-MS separation of catechins and caffeine is demonstrated on a HALO<sup>®</sup> LPH-C18 column showing excellent resolution using purified standards. This column is ideal for low pH separations due to its sterically protected ligand, preventing acid hydrolysis and reducing retention drift over time.

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