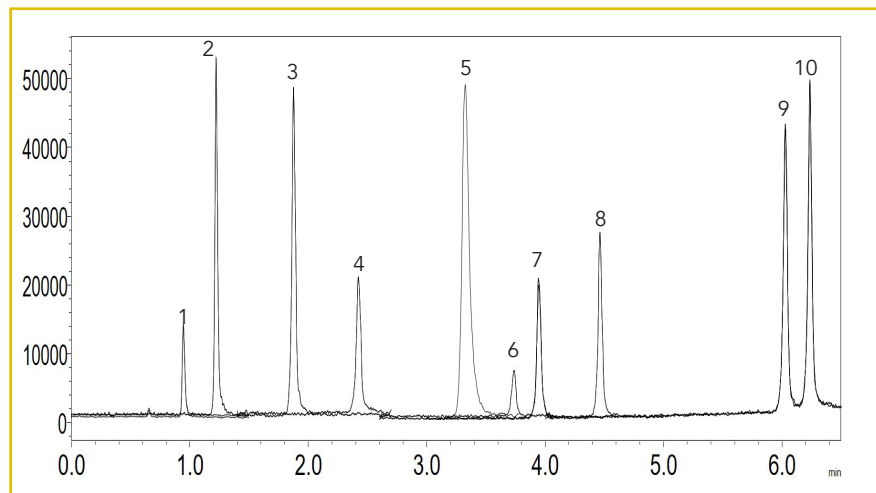




LC-MS Separation of Common Catechins Found in Tea

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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
	0.0	10
	1.0	10
	6.0	21
	7.0	21

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® 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.

