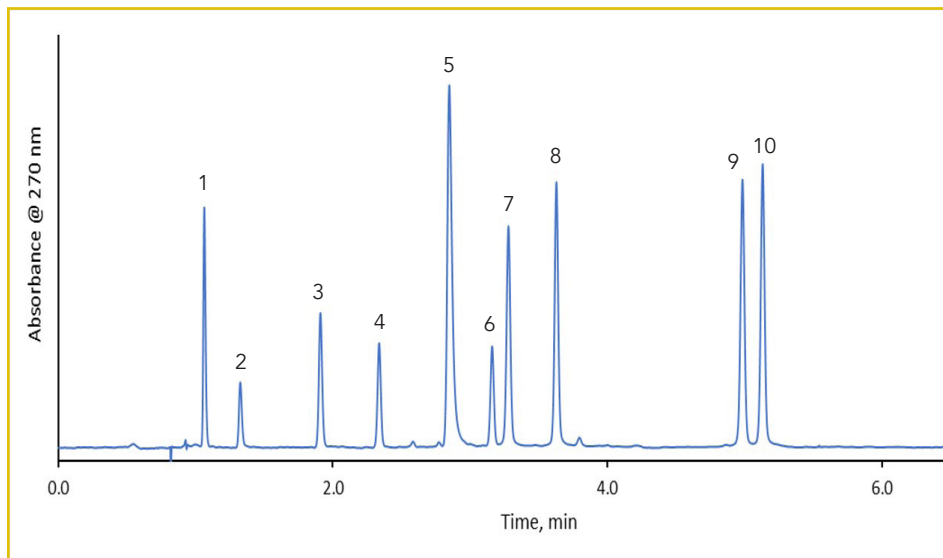




Separation of Common Catechins and Caffeine Found in Tea via LC-UV

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PEAK IDENTITIES

1. Gallic Acid
2. Gallo catechin
3. Epigallocatechin
4. Catechin
5. Caffeine
6. Epicatechin
7. Epigallocatechin Gallate
8. Gallo catechin Gallate
9. Epicatechin Gallate
10. Catechin Gallate

TEST CONDITIONS:

Column: HALO 90 Å LPH-C18 2.7 µm, 4.6 x150 mm

Part Number: 92824-716

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
	0.5	10
	6.0	23
	7.0	23

Flow Rate: 1.8 mL/min

Pressure: 395 bar

Temperature: 40 °C

Detection: PDA, UV 270 nm

Injection Volume: 5 µL

Sample Solvent: 90/10 Water/ Acetonitrile

LC System: Shimadzu Nexera X2

Catechins belong to the subgroup of polyphenols called flavonoids. These compounds contain antioxidant properties and exist in food and medicinal plants, including tea. A UV separation of catechin and caffeine standards shows excellent resolution on a HALO® LPH-C18 column. This column is ideal for low pH separations due to its sterically protected ligand, preventing acid hydrolysis and reducing retention drift over time.

