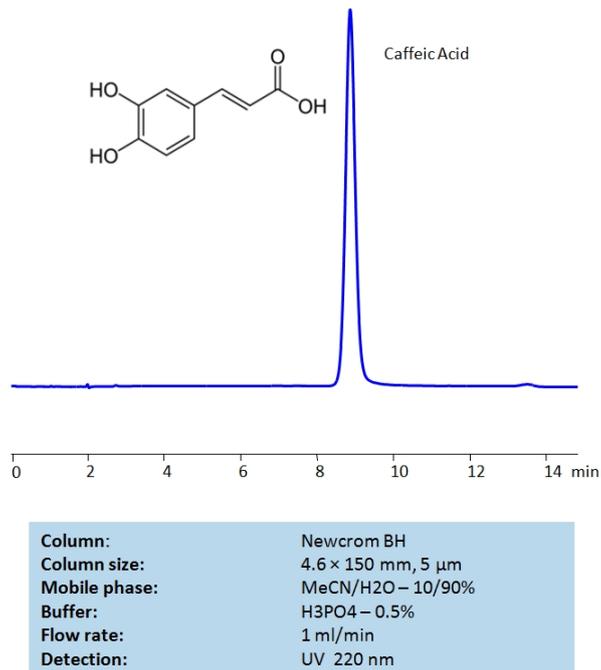


## HPLC Method for Determination of Caffeic Acid on Newcrom BH



High Performance Liquid Chromatography (HPLC) Method for Analysis of Caffeic acid .

Caffeic acid is a hydroxycinnamic acid, a naturally occurring organic compound. It is a type of phenolic acid found in beverages (such as wine, tea, coffee, and apple juice) and food (such as tomatoes, carrots, strawberries, blueberries, and wheat). It's found in all plants as it is a key intermediate in the biosynthesis of lignin. Caffeic acid, like other polyphenols, is believed to exhibit many health benefits associated with its antioxidant properties, including the prevention of inflammation, cancer, neurodegenerative diseases, and diabetes. Caffeic acid is an organic compound that is significant in the fields of pharmacology and biochemistry.

Caffeic acid is a hydroxycinnamic acid, a type of phenolic acid. Its molecular formula is C<sub>9</sub>H<sub>8</sub>O<sub>4</sub>. The structure features a catechol group (a benzene ring with two hydroxyl groups) and a propenoic acid moiety.

Caffeic acid has antioxidant properties, helping to protect cells against oxidative stress. It exhibits anti-inflammatory, anticarcinogenic, and antiviral activities. The compound may also have neuroprotective effects and play a role in reducing cardiovascular diseases. Uses in Research and Industry:

In research, it's often studied for its potential health benefits. In industry, it can be used as a precursor for the synthesis of more complex compounds. Generally, it is considered safe at dietary levels, but like all compounds, it can be toxic at high concentrations.

Caffeic acid can be detected at low UV. Using Newcrom BH mixed-mode column and a mobile phase consisting of acetonitrile (ACN), and water with phosphoric acid (H<sub>3</sub>PO<sub>4</sub>) buffer, caffeic acid can be retained and UV detected at 220 nm.

## Method Parameters

<b>Column</b>	Newcrom BH, 4.6 x 150 mm, 5 µm, 100 Å, dual ended
<b>Mobile Phase</b>	MeCN/H <sub>2</sub> O – 10/90%
<b>Buffer</b>	H <sub>3</sub> PO <sub>4</sub> – 0.5%
<b>Flow Rate</b>	1.0 mL/min
<b>Detection</b>	220 nm

Quelle: <https://sielc.com/hplc-determination-of-caffeic-on-newcrom-bh>