

Capsaicinoids Separation in Hot Sauce by HPLC - AppNote

Date: 14-APRIL-2020 Last Updated: 30-NOVEMBER-2025

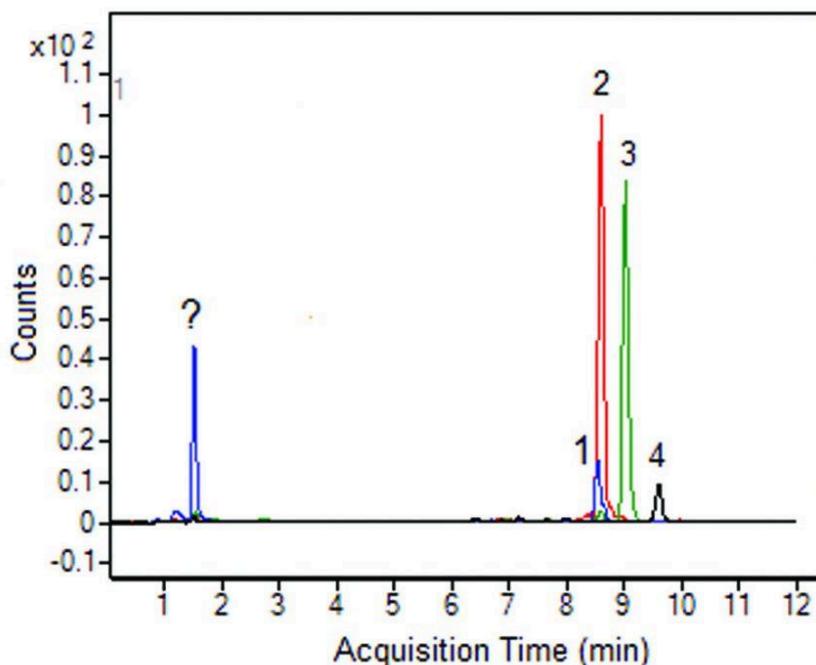
If you have a hot sauce extract containing nordihydrocapsaicin, capsaicin, dihydrocapsaicin, and homodihydrocapsaicin, the Cogent Bidentate C18 2.0™ HPLC column is a good choice for sufficient separation when the compounds are analyzed by LC-MS; look for the $[M+H]^+$ ions.

The following gradient should be a good starting point:

Mobile Phase: A: DI H₂O / 0.1% formic acid (v/v)
B: Methanol

Gradient:	time (min.)	%B
	0	10
	1	10
	9	70
	10	70
	11	10

You may get EICs which look like this:



1. nordihydrocapsaicin, 294.2064 m/z $[M+H]^+$

2. capsaicin, 306.2064 m/z $[M+H]^+$

3. dihydrocapsaicin, 308.2220 m/z [M+H]⁺

4. homodihydrocapsaicin, 322.2377 m/z [M+H]⁺

For peaks 1 and 2, you will be able to obtain separate peaks for each compound in the EICs so there will not be an issue of interference from co-elution.

In terms of sample preparation, try using a Soxhlet extraction procedure.

[Click HERE for Cogent Bidentate C18 HPLC Column Ordering Information.](#)



Printed from the Chrom Resource Center

Copyright 2025, All Rights Apply

MicroSolv Technology Corporation

9158 Industrial Blvd. NE, Leland, NC 28451

Tel: (732) 380-8900

Fax: (910) 769-9435

Email: customers@mtc-usa.com

Website: www.mtc-usa.com