

## How can I separate capsaicinoids in hot sauce by HPLC – Tips & Suggestions

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]<sup>+</sup> ions.

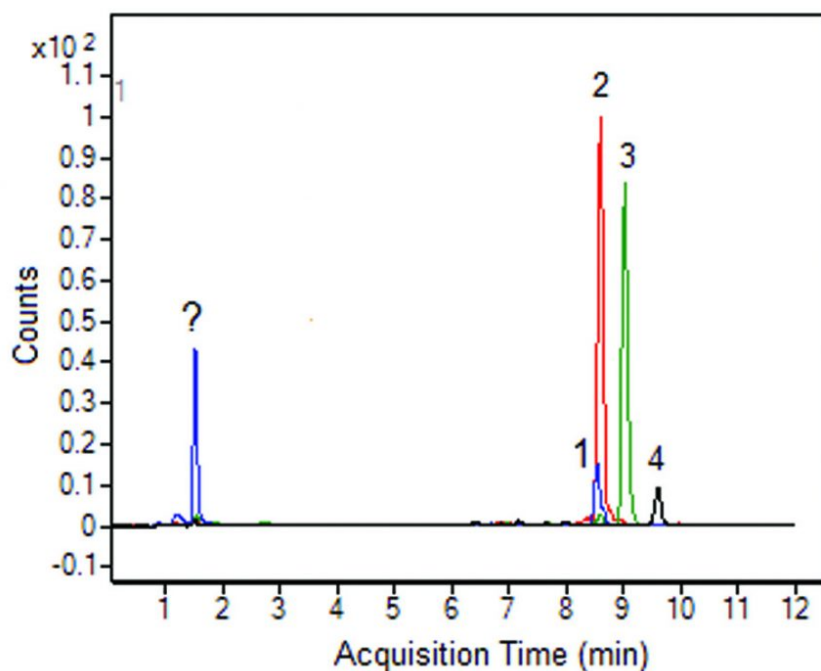
The following gradient should be a good starting point:

**Mobile Phase: A: DI H<sub>2</sub>O / 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:



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1. nordihydrocapsaicin, 294.2064 m/z [M+H]<sup>+</sup>

2. capsaicin, 306.2064 m/z [M+H]<sup>+</sup>

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3. dihydrocapsaicin, 308.2220 m/z [M+H]<sup>+</sup>
4. homodihydrocapsaicin, 322.2377 m/z [M+H]<sup>+</sup>

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™ ordering information



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