

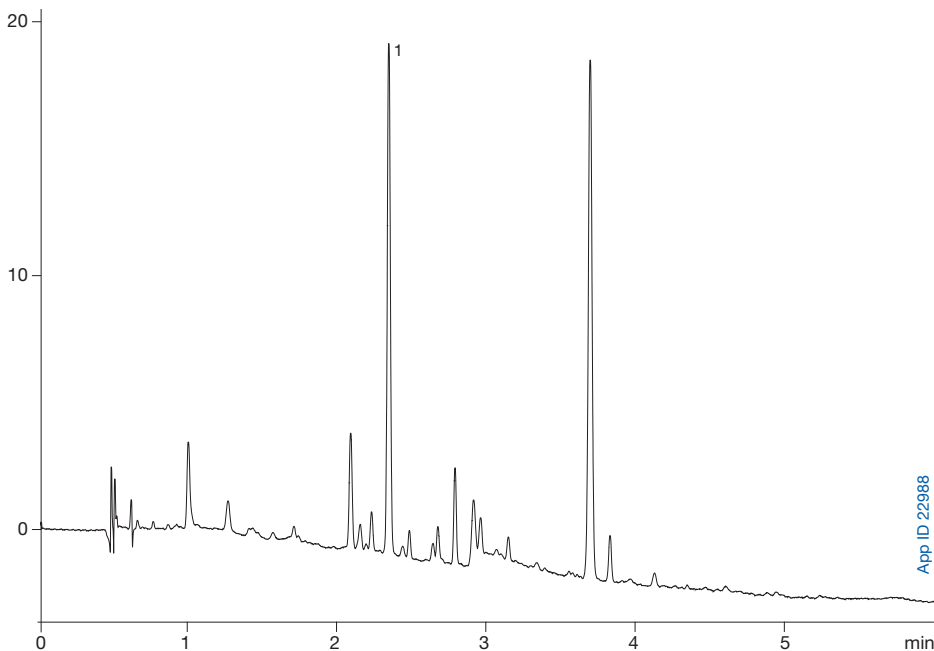
APPLICATION

Forced Degradation of Cefaclor Analysis using Kinetex® EVO C18 Core-Shell LC Column

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Overview

Cefaclor is a broad-spectrum antibiotic used to treat a wide-range of bacterial infections including lung, ear, throat, skin, and urinary tract infections. As part of a pharmaceutical stability indicating method, forced degradation studies are required to demonstrate specificity. The results are used to elucidate degradation pathways and the structures of degradation products, which then assist with formulation and packaging. To acquire as much information as possible from the degradation experiment, it is important to resolve as many degradation peaks as possible. Utilizing the unique selectivity and high efficiency of a Kinetex EVO C18 core-shell column we achieve excellent peak shape and resolution between the active and degradation products within this Cefaclor forced degradation. Additionally, the versatility of the 2.6 µm EVO C18 particle size, allows for excellent performance on both HPLC and UHPLC instrumentation.



LC/UV Conditions

Column: Kinetex 2.6 µm EVO C18
Dimensions: 100 x 4.6 mm
Part No.: 00D-4725-E0
Mobile Phase: A: 0.1% H₃PO₄ in Water
B: 0.1% H₃PO₄ in Acetonitrile
Gradient:

| Time (min) | % B |
|------------|-----|
| 0 | 5 |
| 6 | 40 |

Flow Rate: 1.75 mL/min
Temperature: Ambient
Detection: UV @ 254 nm
Sample: 1. Cefaclor

Sample Pretreatment

Reconstitute 1 mg of neat Cefaclor standard with 1 mL of 1 M HCl. Heat at 60 °C for 6 hours. Neutralize with 1 mL of 1 M NaOH. Refrigerate until ready to inject.



APPLICATION

Kinetex[®] EVO C18 Ordering Information

| 5 µm Minibore Columns (mm) | | | | SecurityGuard [™] ULTRA Cartridges [‡] |
|----------------------------|-------------|-------------|-------------|---|
| 30 x 2.1 | 50 x 2.1 | 100 x 2.1 | 150 x 2.1 | 3/pk |
| 00A-4633-AN | 00B-4633-AN | 00D-4633-AN | 00F-4633-AN | AJO-9298 |
| for 2.1 mm ID | | | | |

| 5 µm MidBore [™] Columns (mm) | | | SecurityGuard [™] ULTRA Cartridges [‡] |
|--|-------------|-------------|---|
| 50 x 3.0 | 100 x 3.0 | 150 x 3.0 | 3/pk |
| 00B-4633-YO | 00D-4633-YO | 00F-4633-YO | AJO-9297 |
| for 3.0 mm ID | | | |

| 5 µm Analytical Columns (mm) | | | | SecurityGuard [™] ULTRA Cartridges [‡] |
|------------------------------|-------------|-------------|-------------|---|
| 50 x 4.6 | 100 x 4.6 | 150 x 4.6 | 250 x 4.6 | 3/pk |
| 00B-4633-E0 | 00D-4633-E0 | 00F-4633-E0 | 00G-4633-E0 | AJO-9296 |
| for 4.6 mm ID | | | | |

| 2.6 µm Minibore Columns (mm) | | | | SecurityGuard [™] ULTRA Cartridges [‡] |
|------------------------------|-------------|-------------|-------------|---|
| 30 x 2.1 | 50 x 2.1 | 100 x 2.1 | 150 x 2.1 | 3/pk |
| 00A-4725-AN | 00B-4725-AN | 00D-4725-AN | 00F-4725-AN | AJO-9298 |
| for 2.1 mm ID | | | | |

| 2.6 µm MidBore [™] Columns (mm) | | | SecurityGuard [™] ULTRA Cartridges [‡] |
|--|-------------|-------------|---|
| 50 x 3.0 | 100 x 3.0 | 150 x 3.0 | 3/pk |
| 00B-4725-YO | 00D-4725-YO | 00F-4725-YO | AJO-9297 |
| for 3.0 mm ID | | | |

| 2.6 µm Analytical Columns (mm) | | | SecurityGuard [™] ULTRA Cartridges [‡] |
|--------------------------------|-------------|-------------|---|
| 50 x 4.6 | 100 x 4.6 | 150 x 4.6 | 3/pk |
| 00B-4725-E0 | 00D-4725-E0 | 00F-4725-E0 | AJO-9296 |
| for 4.6 mm ID | | | |

| 1.7 µm Minibore Columns (mm) | | | SecurityGuard [™] ULTRA Cartridges [‡] |
|------------------------------|-------------|-------------|---|
| 50 x 2.1 | 100 x 2.1 | 150 x 2.1 | 3/pk |
| 00B-4726-AN | 00D-4726-AN | 00F-4726-AN | AJO-9298 |
| for 2.1 mm ID | | | |

[‡] SecurityGuard ULTRA Cartridges require holder, Part No.: AJO-9000

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Kinetex EVO is patented by Phenomenex. U.S. Patent Nos. 7,563,367 and 8,658,038 and foreign counterparts.

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