

APPLICATIONS

Separation of Estrone, Beta-Estradiol, and Estriol by LC-MS/MS Analysis

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Overview

In this study estrogen analytes estrone, beta-estradiol, and estriol were derivatized for LC-MS/MS analysis. Analytes were successfully separated giving accurate quantitation and separation.

Sample Preparation

Add:	50 µL estrogen mixture (in 1mg/mL Na ₂ CO ₃) with 50 µL of 1g/L dansyl chloride in acetonitrile
Vortex:	Briefly
Incubate:	70 °C for 10 minutes.
Inject:	Inject 10 µL onto LC-MS/MS

LC-MS/MS Conditions

- Column:** Kinetex® 1.7 µm Biphenyl 100 Å
- Dimension:** 50 x 2.1 mm
- Part No.:** [00B-4628-AN](#)
- Mobile Phase:** A: 0.1 % Formic Acid in Water
B: Methanol
- Gradient:**

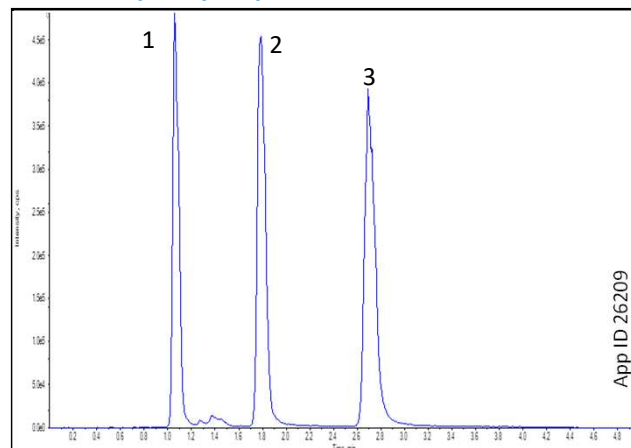
Time (min)	%A	%B
0.2	100	0
0.4	20	80
1.2	10	90
6.2	0	100
6.5	100	0
- Flow Rate:** 0.5 mL/min
- Temperature:** Ambient
- Detection:** MS/MS (MRM, SCIEX® 4000 QTRAP®)
- Sample:**
 1. Estriol, E3
 2. Beta-Estradiol, BE2
 3. Estrone, E1

MS/MS Conditions

- Ion Source:** Turbo Spray, Positive
- CUR:** 10
- CAD:** Medium
- DP:** 70
- EP:** 10
- CXP:** 15
- GS1:** 50
- GS2:** 50
- IS:** 5000
- Source Temp:** 650 °C
- iHe:** ON
- CEM:** 2200 (Detector, positive)

ID	Time (min)	Q1	Q3	Dwell	CE
E1 (Quan)	2.34	504.2	171.1	50	40
E1 (Qual)	2.34	504.2	156.1	50	40
BE2 (Quan)	1.69	506.2	171.1	50	50
BE2 (Qual)	1.69	506.2	156.1	50	50
E3 (Quan)	1.09	522.2	171.1	50	45
E3 (Qual)	1.09	522.2	156.1	50	45

Kinetex Biphenyl Separation



Revision: 0

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APPLICATIONS

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