

# APPLICATIONS

## Extracting Methylphenidate (Ritalin®) from Plasma using Strata®-X-Drug B Solid Phase Extraction

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### Overview

This application describes an extraction of methylphenidate, commonly known as Ritalin, from plasma using Strata-X-Drug B SPE followed by a LC-MS/MS analysis using a Kinetex® 2.6 µm Biphenyl LC column. By using Strata-X-Drug B, we were able to eliminate the conditioning and equilibration steps, saving significant time and solvent.

### Pre-treatment

Dilute 180 µL plasma and 20 µL spiking solution with 200 µL 0.1% Formic acid in Water.

### SLE Protocol

- 96-Well Plate:** Strata-X-Drug B (30mg/Well)
- Part No.:** 8E-S128\_TGB
- Load:** Pre-treated sample
- Wash 1:** 600 µL 0.1% Formic acid in Water
- Wash 2:** 600 µL Acetonitrile/IPA (1:1)
- Dry:** 5 minutes under vacuum
- Elute:** 2x 300 µL Acetonitrile/Methanol (1:1) with 5% NH<sub>4</sub>OH
- Dry Down:** Under Nitrogen at 30 °C
- Reconstitute:** 100 µL 0.1% Formic acid/Methanol (4:1)

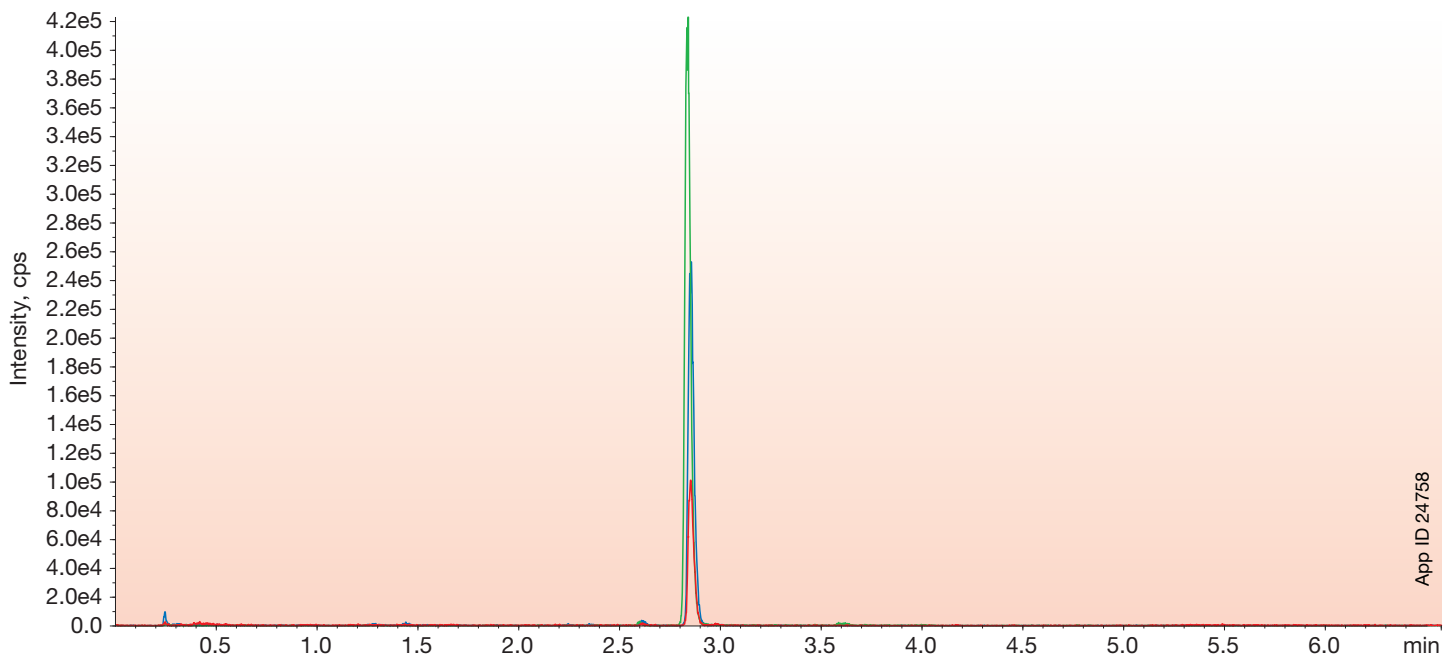
### LC Conditions

- Column:** Kinetex® 2.6 µm Biphenyl
- Dimensions:** 50 x 2.1 mm
- Part No.:** 00B-4622-AN
- Mobile Phase:** A: 0.1% Formic acid in Water  
B: 0.1% Formic acid in Methanol
- Gradient:**

Time (min)	% B
0	5
3	95
4	95
4.01	5
6.5	5
- Flow Rate:** 0.45 mL/min
- Injection Volume:** 5 µL
- Detection:** MS/MS (SCIEX API 4000™)

Concentration	% Recovery	% CV
300 pg (n=7)	99	6
1.5 ng (n=5)	82	7
9 ng (n=6)	98	7

### Extracted Methylphenidate from Plasma



App ID 24758



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## Ordering Information Kinetex

Kinetex 2.6 µm Columns (mm)			SecurityGuard™ ULTRA Cartridges†
Phases	50 x 2.1	100 x 2.1	3/pk
Biphenyl	00B-4622-AN	00D-4622-AN	AJ0-9209 for 2.1 mm ID

†SecurityGuard ULTRA cartridges require holder, Part No. AJ0-9000.

## Strata<sup>®</sup>-X-Drug B Plus SPE

Sorbent Mass	Part No.	Unit
<b>96-Well Plate</b>		
10 mg	8E-S128-AGB-P	2 Plates/Box

## Strata-X-Drug B SPE

Sorbent Mass	Part No.	Unit
<b>Tube</b>		
10 mg	8B-S128-AAK	1 mL (100/box)
30 mg	8B-S128-TAK	1 mL (100/box)
30 mg	8B-S128-TBJ	3 mL (50/box)
60 mg	8B-S128-UBJ	3 mL (50/box)
60 mg	8B-S128-UCH	6 mL (30/box)
60 mg	8B-S128-UCL	6 mL (200/bag)
<b>Giga™ Tube</b>		
100 mg	8B-S128-EDG	12 mL (20/box)
<b>96-Well Plate</b>		
10 mg	8E-S128-AGB	2 Plates/Box
30 mg	8E-S128-TGB	2 Plates/Box

## Presston™ 100 Positive Pressure Manifold

Part No.	Description
AH0-9334	Presston 100 Positive Pressure Manifold, 96-Well Plate
AH0-9342	Presston 100 Positive Pressure Manifold, 1 mL Tube Complete Assembly
AH0-9347	Presston 100 Positive Pressure Manifold, 3 mL Tube Complete Assembly
AH0-9343	Presston 100 Positive Pressure Manifold, 6 mL Tube Complete Assembly

The Presston 100 96-Well Positive Pressure Manifold can also process 1, 3, and 6 mL tubes using the following adapter kits

## Presston 100 Tube Adapter Kits (for AH0-9334)

Part No.	Description
AH0-9344	1 mL Tube Adapter Kit
AH0-9345	3 mL Tube Adapter Kit
AH0-9346	6 mL Tube Adapter Kit



**WARRANTY** Phenomenex warrants that for a period of 12 months following delivery, the Presston 100 Positive Pressure Manifold you have purchased will perform in accordance with the published specifications and will be free from defects in materials or workmanship. In the event that the Presston 100 Positive Pressure Manifold does not meet this warranty, Phenomenex will repair or replace defective parts. Please visit [www.phenomenex.com/Presston](http://www.phenomenex.com/Presston) for complete warranty information.



If Phenomenex products in this technical note do not provide at least an equivalent separation as compared to other products of the same phase and dimensions, return the product with comparative data within 45 days for a FULL REFUND.

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