

HPLC Application

ID No.: 25490

Extraction of Opiates in Human Serum Using Strata-X PRO and a Kinetex 2.6 µm Biphenyl LC Column

Column: Kinetex[®] 2.6 µm Biphenyl 100 Å, LC Column 50 x 3.0 mm, Ea

Dimensions: 50 x 3 mm ID

Order No: 00B-4622-Y0

Elution Type: Gradient

Eluent A: 0.1% Formic acid in Water

Eluent B: 0.1% Formic acid in Methanol

Gradient Profile:	Step No.	Time (min)	Pct A	Pct B
	1	0	90	5
	2	4	5	95
	3	5.5	5	95
	4	5.51	95	5
	5	7	95	5

Flow Rate: 0.5 mL/min

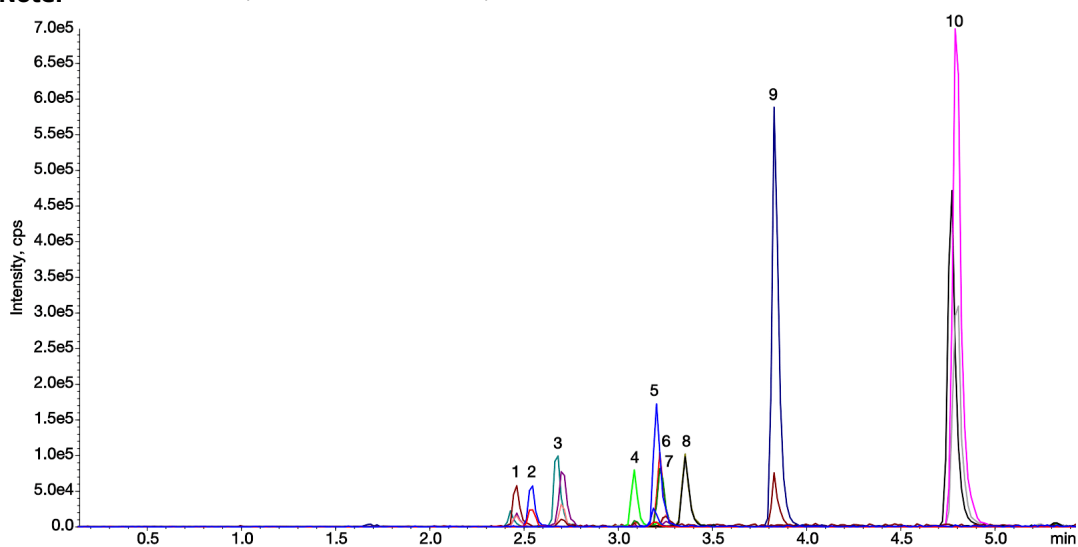
Col. Temp.: 45 °C

Detection: LC/MS/MS @ (ambient)

Analyst Note: Human Serum Analyte diluted with initial mobile phase



Products used in this application:



Extraction of Opiates in Human Serum Using Strata-X PRO and a Kinetex 2.6 μ m Biphenyl LC Column

ANALYTES:

- 1 Morphine
- 2 Oxymorphone
- 3 Hydromorphone
- 4 Naloxone
- 5 6-MAM
- 6 Codeine
- 7 Oxycodone
- 8 Hydrocodone
- 9 Norfentanyl
- 10 Fentanyl



Sample Preparation Details

for HPLC Application ID No.: 25490

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PRODUCT DESCRIPTION:

Order No.:

SOLID PHASE EXTRACTION (SPE) PROCEDURE:

Note: The solvent volumes shown below are for a bed mass.

The solvent volumes will need to be adjusted for a smaller or larger bed mass.

Condition:

Load:

Wash:

Dry:

Elute:

Final Prep and Analysis:

200 µL Human serum diluted 1:1 with 1% Formic acid in Water

Inject: 10 µL on HPLC LC/MS/MS @ (ambient)

ANALYTES:	Spiked Conc. (ng/mL)	Log P	pKa	% Rec	%RSC (n=0)
1 Morphine	50			68	
2 Oxymorphone	50			80	
3 Hydromorphone	50			75	
4 Naloxone	50			83	
5 6-MAM	50			77	
6 Codeine	50			70	
7 Oxycodone	50			64	
8 Hydrocodone	50			73	
9 Norfentanyl	50			57	
10 Fentanyl	50			79	

Note: This method is designed as a convenient starting point for further investigation and can be tailored to meet your extraction goals. Call your local Phenomenex Representative for assistance in method development and optimization techniques.

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For more information contact your Phenomenex Representative at support@phenomenex.com



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