

Application Note

Fast and Simple Bioanalytical Plasma Sample Extraction Using Oasis HLB SPE for High Analyte Recovery

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This is an Application Brief and does not contain a detailed Experimental section.

Abstract

This application note describes the fast and simple bioanalytical plasma sample extraction using Oasis HLB solid phase extraction, requiring no protocol method development, for high extraction recovery of several small molecule pharmaceuticals.

Experimental

SAMPLE PREPARATION AND EXTRACTION

Oasis HLB SPE Protocol
(96-well Plate, 10 mg Sorbent per
Well, p/n 186000128)

Sample pretreatment:
500 µL 4% H₃PO₄ to 500 µL
plasma sample

Load:
1000 µL pre-treated sample

Wash:
500 µL Water

Elute:
2 × 125 µL Methanol



Sample Preparation & Extraction.

LC-MS Analysis

UPLC	I-Class, FTN with Column Manager (CMA)
MPA	0.1% FA in water
MPB	0.1% FA in ACN
Column/sorbents	HSS PFP 1.8 µm, 2.1 mm x 50 mm p/n 186005965
Col. temp.	35 °C
Sample temp.	10 °C
Inj. vol.	5 µL
WNW	90:10 Water:ACN
SNW	25:25:25:25 Water:MeOH:ACN:IPA
MS	Xevo® TQ-Smicro
Capillary (kV)	3.0
Cone voltage	30 V
Desolvation temp.	500 °C
Desolvation flow	1100 L/Hr
Cone gas flow	150 L/Hr

UPLC Gradient Table

Time (min)	Flow (mL/min)	% MPA	% MPB
0.0	0.5	100.0	0.0
5.0	0.5	5.0	95.0
6.0	0.5	5.0	95.0
6.1	0.5	100.0	0.0
7.0	0.5	100.0	0.0

Results and Discussion

High Analyte Recovery from Plasma using Oasis HLB SPE

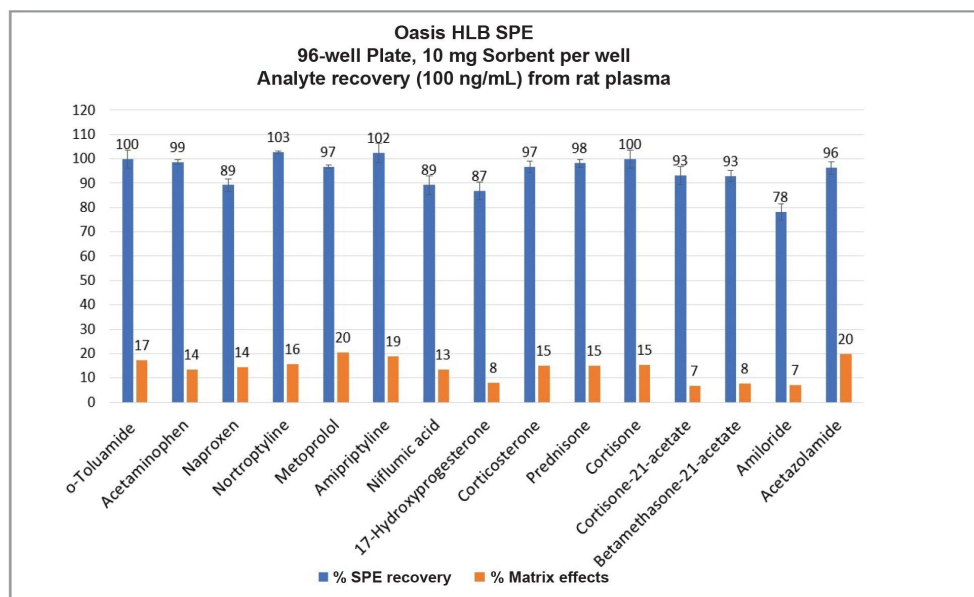


Figure 1. Demonstration of Oasis HLB SPE Performance requiring no protocol optimization, with >78% recovery and matrix effects <20% from plasma.

Ordering Information

Description	P/N
Oasis HLB 96-well Plate, 10 mg Sorbent per Well, 30 µm	186000128
96-well Sample Collection Plate, 2 mL square well	186002482
Polypropylene Cap Mat Square Well for 96 well	186002484
ACQUITY UPLC HSS PFP Column, 100 Å, 1.8 µm, 2.1 mm × 50 mm	186005965

Featured Products

ACQUITY UPLC I-Class PLUS System <<https://www.waters.com/134613317>>

Xevo TQ-XS Triple Quadrupole Mass Spectrometry <<https://www.waters.com/134889751>>

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