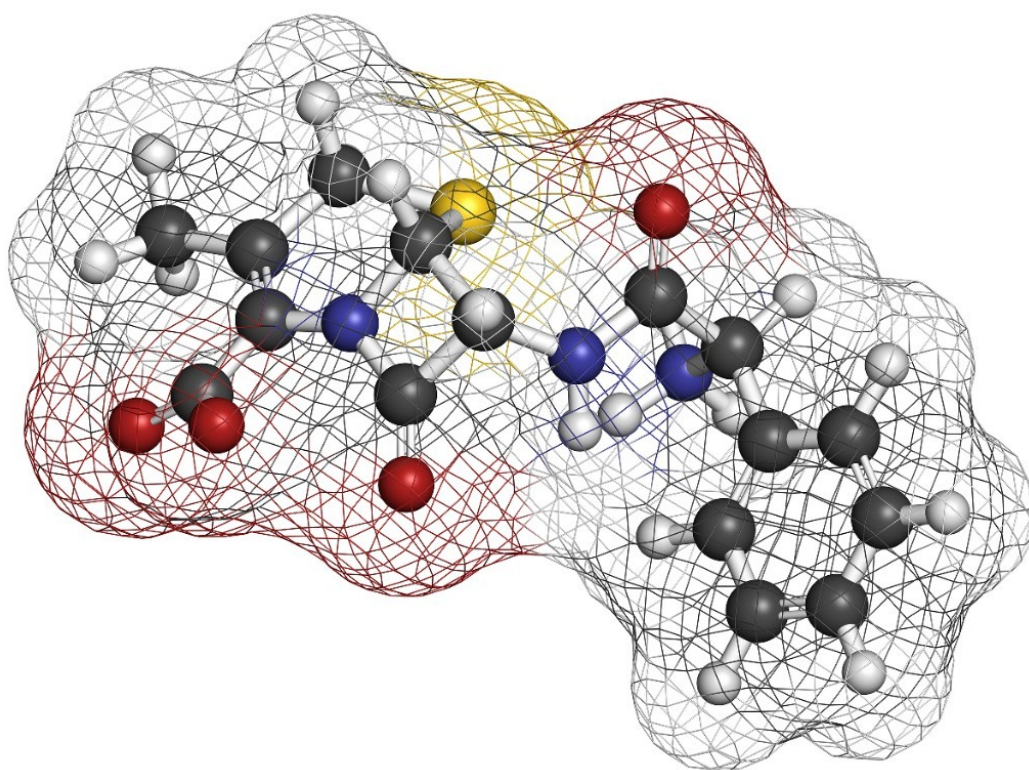


Cephalexin on Oasis MCX

Waters Corporation



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

Abstract

This application brief demonstrates the analysis of cephalexin on Oasis MCX.

Introduction

Cephalexin is a member of the cephalosporin class of antibiotics used for the treatment of bronchitis, pneumonia, UTI's and infections of the ears and throat. This molecule is zwitterionic, meaning it has both carboxylic acid and amine moieties. Because the molecule has ionizable functionalities that can be either positively or negatively charged, screening all 4 Oasis sorbents following the Oasis 2x4 Method is clearly the mechanism for identifying the best sorbent. Oasis MCX resulted in the best recoveries and would be used for further sample preparation method development.

Experimental

Test Conditions

Oasis MCX 10-mg plate (P/N 186000259)

Condition:	500 μ L MeOH
Equilibrate:	500 μ L H ₂ O
Load:	500 μ L (250 μ L rat plasma, diluted 1:1 with 4% H ₃ PO ₄ in H ₂ O)
Wash 1:	500 μ L 2% HCOOH
Wash 2:	500 μ L MeOH
Elute:	250 μ L (125 μ L x 2) 5% NH ₄ OH in

Oasis MCX 10-mg plate (P/N 186000259)

MeOH

Options:

1. Dilute 250 μ L H₂O with 2% FA
2. Evaporate/
Reconstitute
3. Direct inject

Inject:

10 μ L

Column:

ACQUITY UPLC
BEH C₁₈ 2.1 x 50
mm, 1.7 μ m

Mobile phase A:

0.1% HCOOH in H₂O

Mobile phase B:

0.1% HCOOH in
MeOH

Flow rate:

0.4 mL /min

Injection volume:

10.0 μ L

Column temperature:

45 °C

Sample temperature:

15 °C

Sample diluent:

50/50
water/methanol

Instrument:

ACQUITY UPLC

Oasis MCX 10-mg plate (P/N 186000259)

with Quattro
Premier

Quattro Premier

ESI+ capillary:	3.0kV
Source temp.:	120 °C
Desolvation temp.:	350 °C
Cone gas flow:	50 L /Hr
Desolvation gas flow:	700 L /Hr
Collision cell pressure:	2.59 e ⁻³ mbar
MRM transition:	348 → 157.9
Cone voltage:	20V
Collision energy:	18eV

Results and Discussion

Featured Products

· [ACQUITY UPLC System <https://www.waters.com/514207>](https://www.waters.com/514207)

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