

Tetracyclines in Serum

Waters Corporation



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

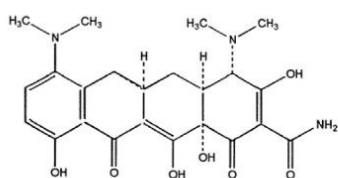
Abstract

This application brief highlights the analysis of tetracyclines in serum using Symmetry Shield RP₈ Columns.

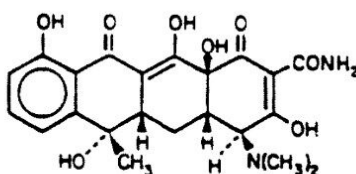
Introduction

The compounds analyzed in this study are:

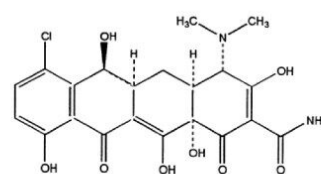
1. Minocycline
2. Tetracycline
3. Demeclocycline (I.S.)



1. Minocycline



2. Tetracycline



3. Demeclocycline (I.S.)

Experimental

HPLC Method

Column:	Symmetry Shield RP ₈ , 3.0 x 150 mm, 5 μm
Guard column:	Symmetry guard column, 3.9 x 20 mm, 5μm
Part numbers:	Column - WAT094243, Guard - WAT200675
Mobile phase:	0.1% TFA in Water, Methanol, Acetonitrile 91:2:7
Flow rate:	0.90 mL/min
Injection volume:	20 μL of reconstituted porcine serum extract

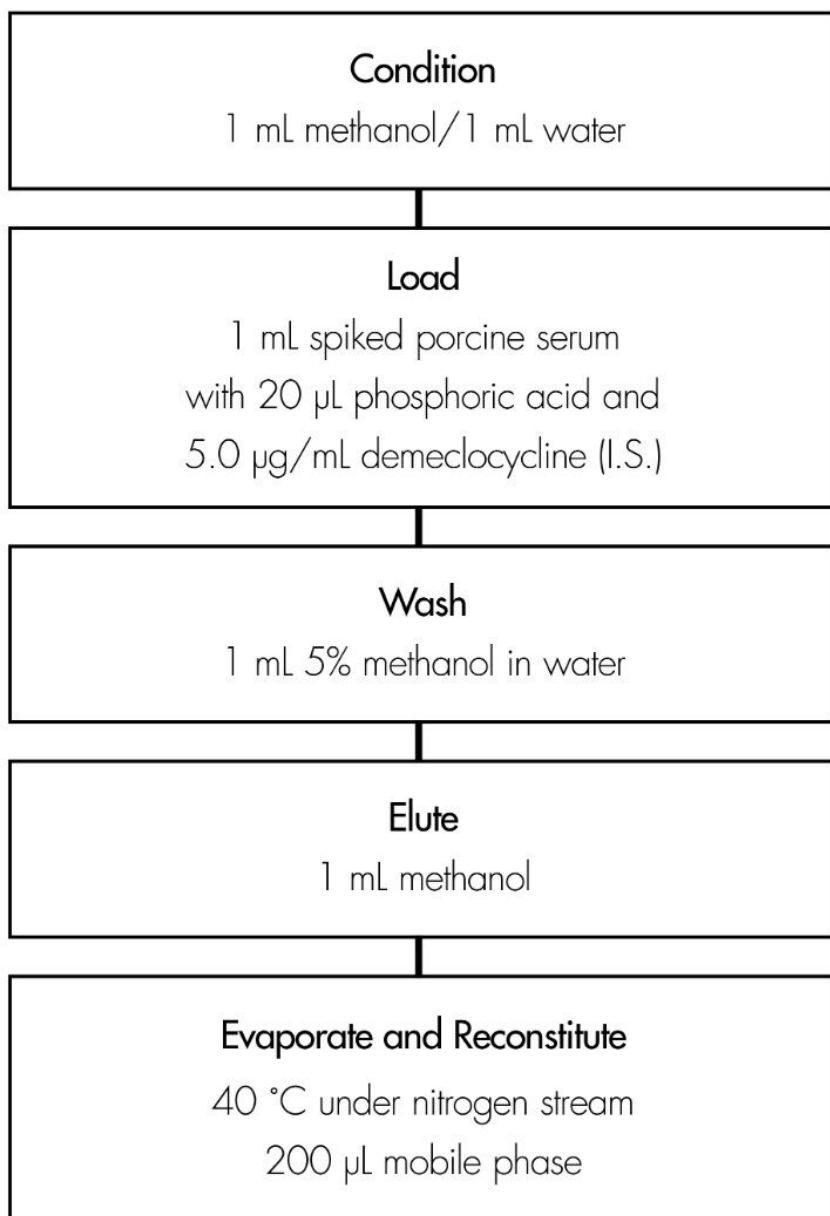
Detection:

UV @ 350 nm

Oasis® HLB Extraction Method

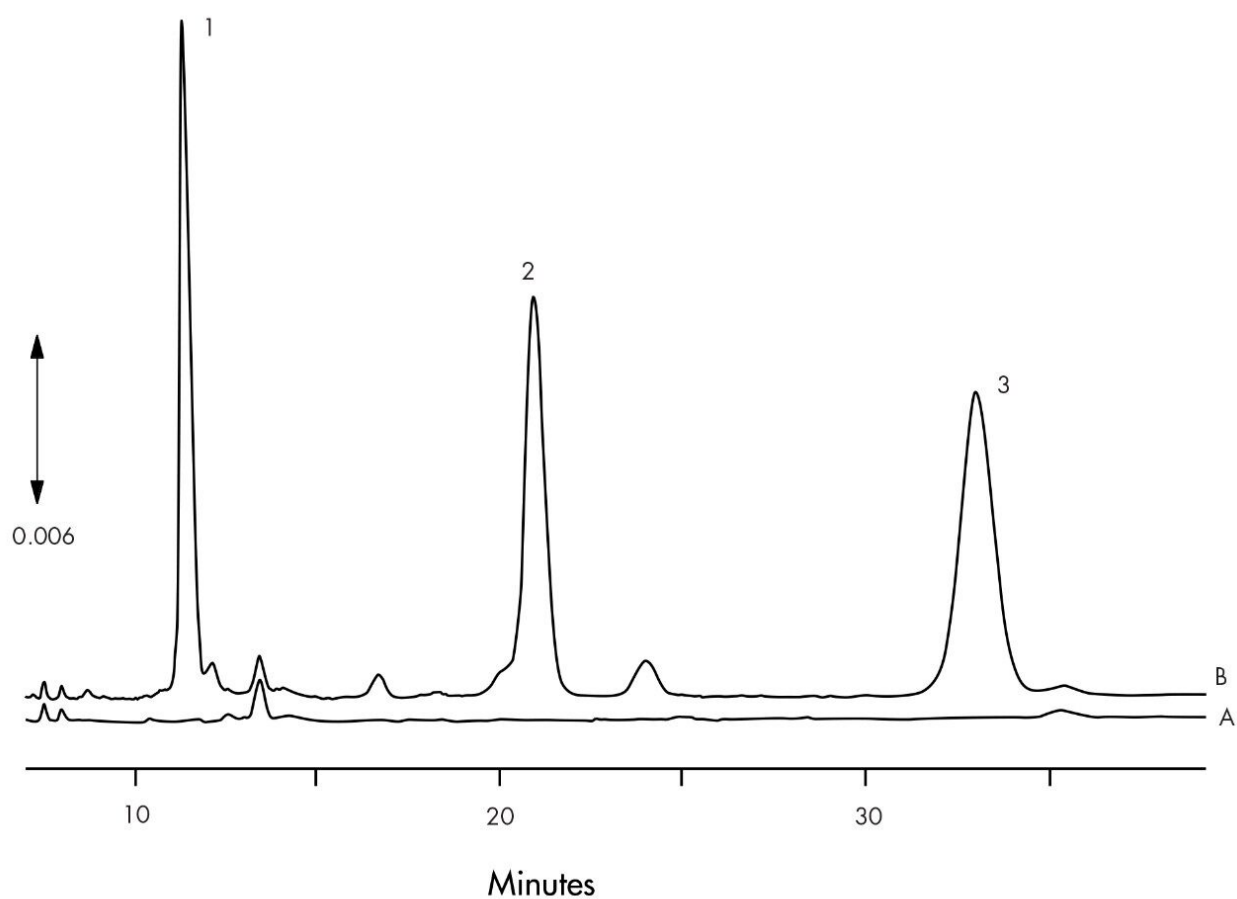
Oasis® HLB 1 cc/30 mg Extraction Cartridge

Part Number WAT094225



Results and Discussion

Compound	Concentration $\mu\text{g/mL}$	% Recovery	%RSD (n=6)
Minocycline	2.50	96.1%	1.3%
	0.500	88.0%	1.6%
Tetracycline	2.50	101.0%	0.5%
	0.500	97.8%	1.4%



Chromatogram of Serum Extracts: A) Blank B) Spiked Sample.

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