

Tetracyclines in Milk (Antibacterials)

Waters Corporation

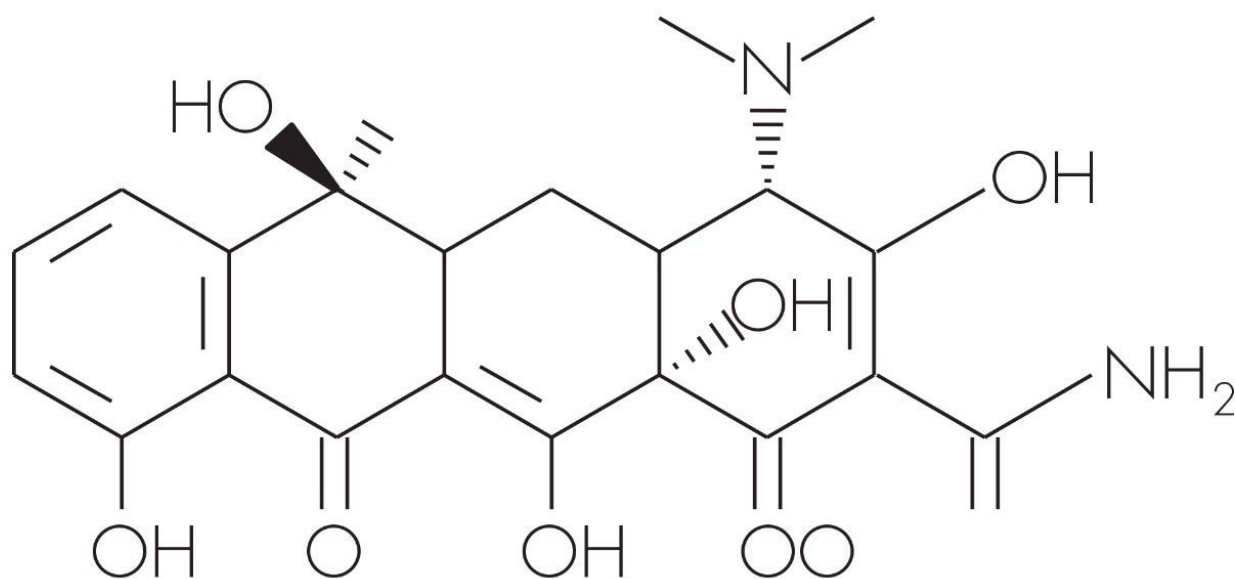
This is an Application Brief and does not contain a detailed Experimental section.

Abstract

This application brief demonstrates analysis of tetracyclines in milk.

Introduction

The compound analyzed in this study is tetracyclines in milk.



TETRACYCLINE

Experimental

The milk sample (15 mL) is diluted with 25 mL of McIlvaine (mixed citrate/phosphate, pH 4.1) buffer with added EDTA. The diluted sample is centrifuged at 8000 x g for 10 minutes at 5° C. Any floating lipid layer is removed and the remaining supernatant is processed using Oasis HLB solid-phase extraction cartridges.

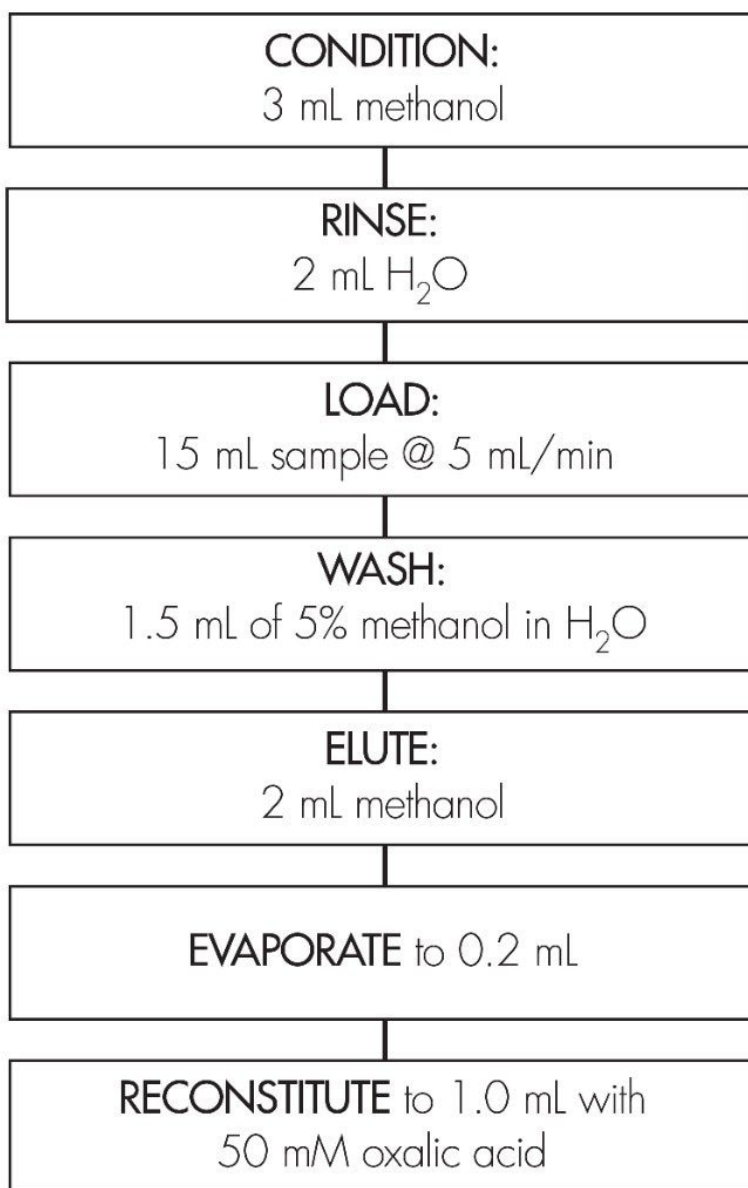
For details of the buffer preparation procedure see *J.AOAC Int.*, 79 (2), p 405 (1996).

HPLC Method

Column:	Nova-Pak C ₈ , 3.9 x 150 mm, 4 μm
Part number:	WAT086344
Mobile phase:	ACN, Methanol, 50 mM oxalic acid in water; 13:13:74
Flow rate:	0.8 mL/min
Injection volume:	60 μL
Detection:	UV @ 365 nm

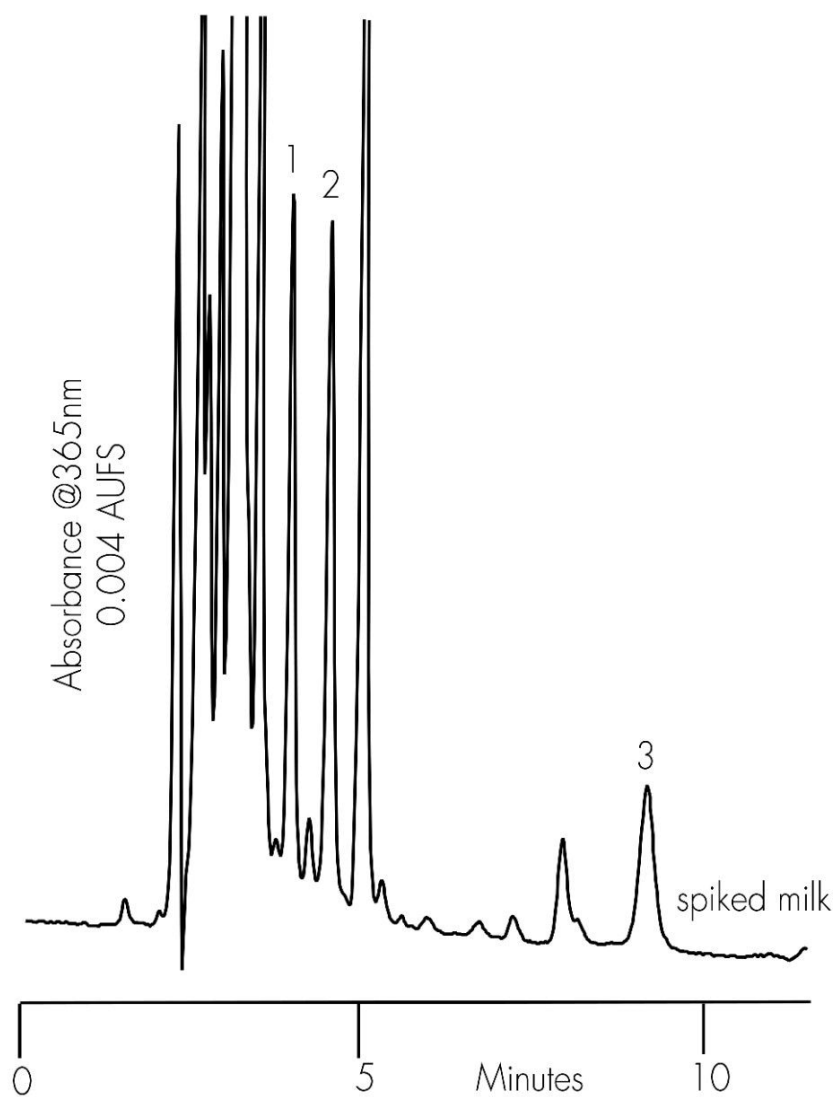
OASIS® HLB EXTRACTION METHOD

Conditions for Oasis® HLB Cartridge, 3 cc, 60 mg
Part Number WAT094226



Results and Discussion

Compounds	% Recovery	
	Tap water	Apple
	Spike level 25 µg/L 4 replicates	Spike level 50 µg/L 4 replicates
1. Oxytetracycline	70.7 (3.5)	67.7 (5.8)
2. Tetracycline	73.7 (7.3)	68.5 (5.1)
3. Chlortetracycline	76.7 (2.9)	67.3 (1.8)



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