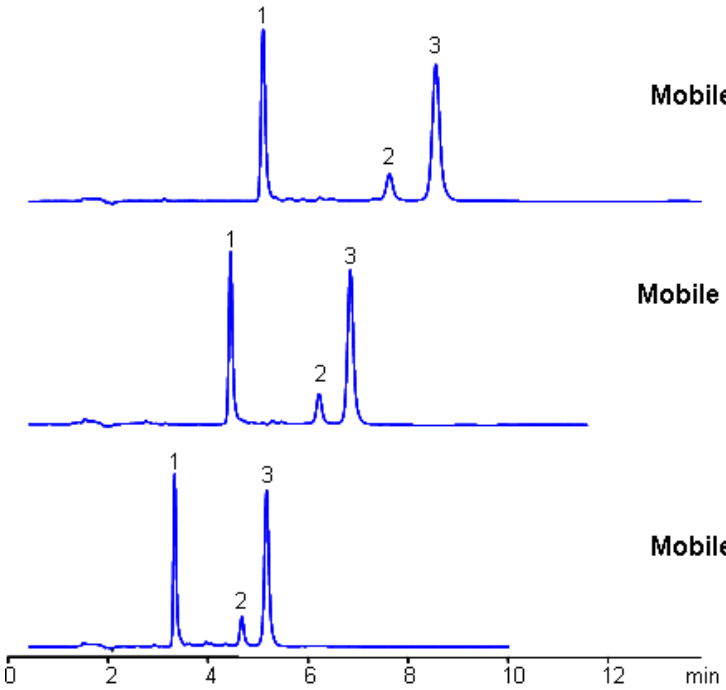
Separation of Oxytetracycline and Chlortetracycline in Mixed-Mode

https://sielc.com/Separation_of_Oxytetracycline_and_Chlortetracycline_in_Mixed-Mode

Chromatogram

1. Oxytetracycline
2. Impurity of Chlortetracycline
3. Chlortetracycline

Column:	**Primesep 100**
Size:	4.6 x 150 mm, 3 um
Flow:	1.0 mL/min
Detection:	UV 250 nm



Mobile phase: MeCN 45% with 0.1% H2SO4

Mobile phase: MeCN 45% with 0.2% H2SO4

Mobile phase: MeCN 50% with 0.1% H2SO4

Description

Oxytetracycline and chlortetracycline are polar compounds related to broad-spectrum of tetracycline group of antibiotics. Slight hydrophobicity and presence of the basic group in both compounds allow to employ mixed-mode reversed-phase cation-exchange mechanism for separation of these compounds. Method can be used for analysis of antibiotics and related impurities with LC/MS compatible conditions.

Method Parameters

Mobile Phase	MeCN/H2O
Buffer	H2SO4
Flow Rate	1.0 ml/min
Detection	UV, 250 nm
Class of Compounds	Drug, Acid, Hydrophilic, Ionizable
Analyzing Compounds	Oxytetracycline, Chlortetracycline

HPLC Column Used

Primesep 100, 4.6×150 mm, 3 µm, 100A

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