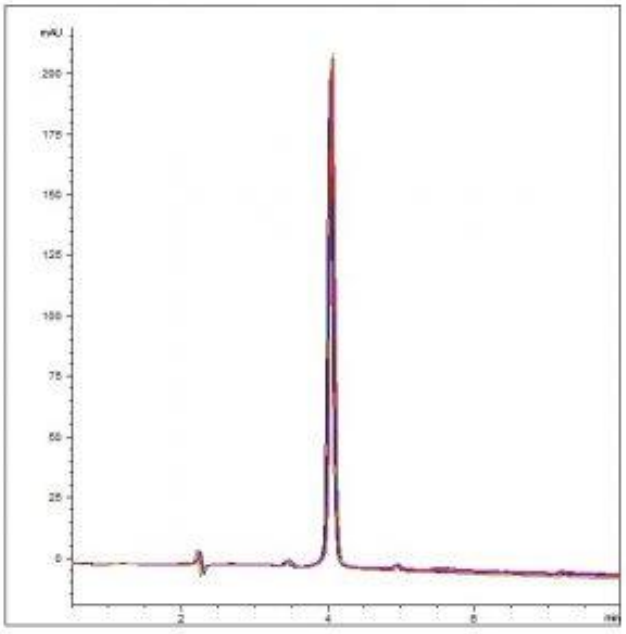
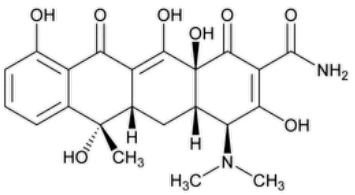
Tetracycline USP Assay by HPLC- AppNote

USP Method for Tetracycline

This USP Tetracycline Assay is performed and a five injection overlay shows run to run consistency and Precision. The Peak Efficiency is very good and Peak Tailing guidelines are easily met with RSD values less than 0.4%. This demonstrates a good Alternate Column for your USP Method.





Peak: Tetracycline

Met hod Conditions:

Column: Cogent RP C18 PE™, 5 µm, 100 Å
Catalog No.: 84518-15P
Dimensions: 4.6 x 150 mm

Mobile Phase:

- A: DI Water 0.1% Phosphoric Acid
- B: Acetonitrile

Gradient:

Time *(minutes)*	%B
0	15
7.5	15
7.6	40
10	15

Injection vol.: 10 µL
Flow rate: 1.0 mL / minute
Detection: UV @ 280 nm

Sample Preparation: Standard solution: 100 µg / mL of USP Tetracycline in Mobile Phase A

Most recently appeared in Pharmacopeial Forum: Volume No. 43(6) Page Information:

USP43-NF38 – 1827
USP42-NF37 – 1787
USP41-NF36 – 1690

Note: Tetracycline is a broad spectrum antibiotic produced by the Streptomyces genus of Actinobacteria. It exerts a bacteriostatic effect on bacteria by binding reversible to the bacterial 30S ribosomal subunit and blocking incoming aminoacyl tRNA from binding to the ribosome acceptor site. It also binds to some extent to the bacterial 50S ribosomal subunit and may alter the cytoplasmic membrane causing intracellular components to leak from bacterial cells.

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