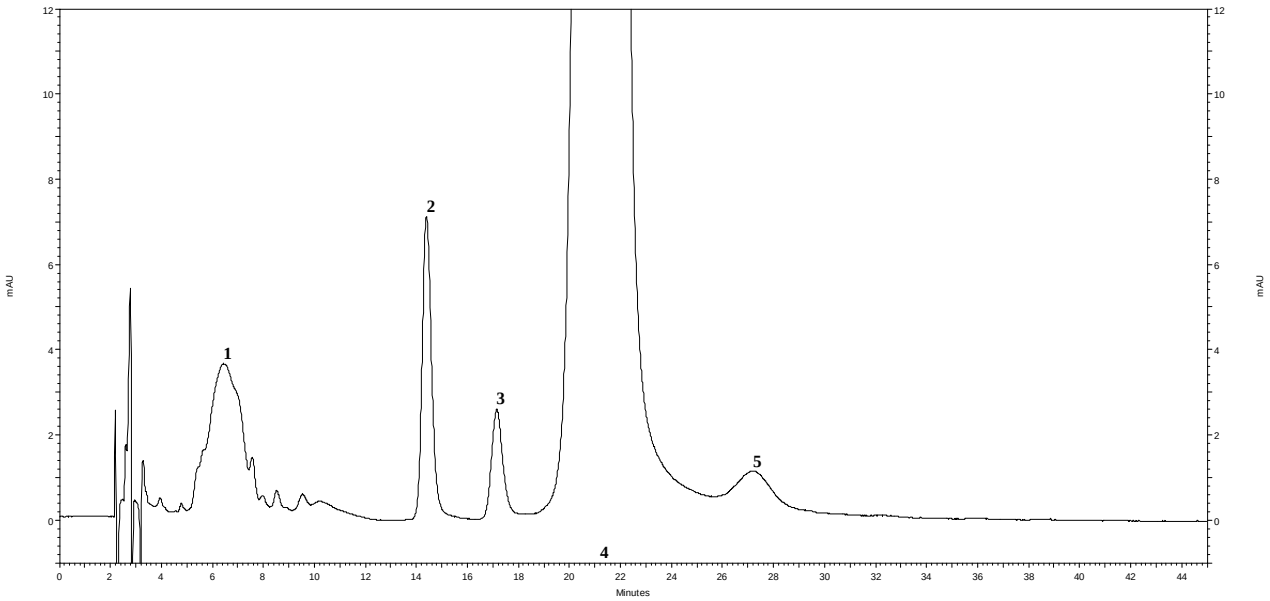
Doxycycline Tablets – BP 2019

These chromatograms are provided for information only as an aid to analysts and are intended as guidance for the interpretation and application of BP monographs.

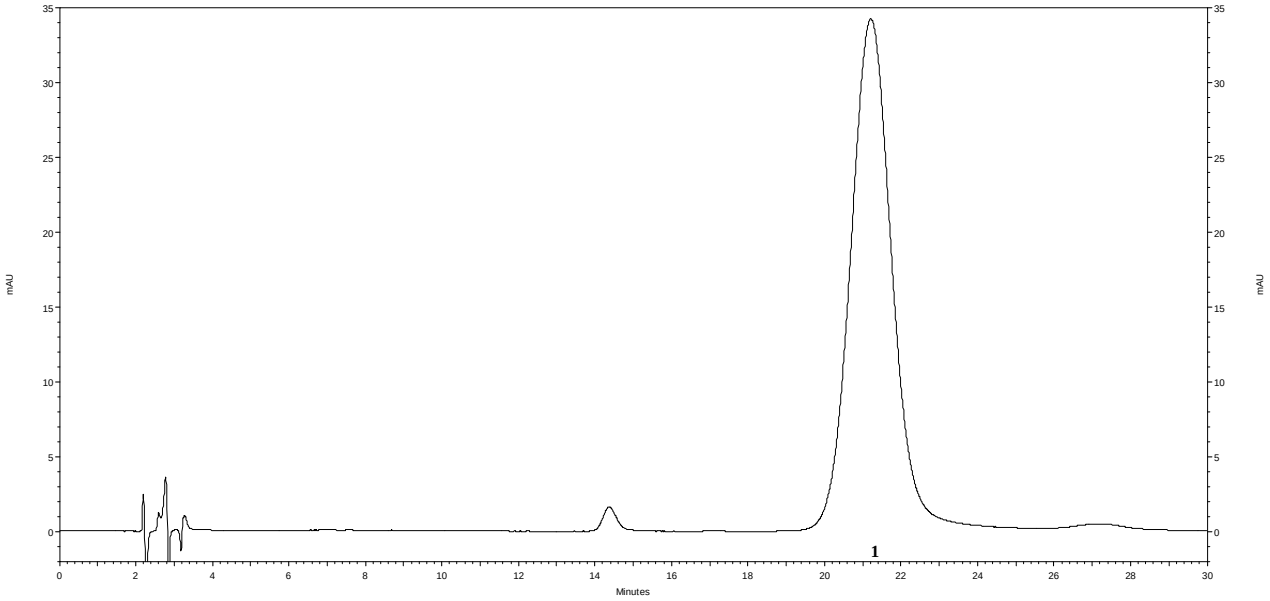
Typical chromatogram for solution (3) in the Related Substances test for Doxycycline Tablets as published in BP 2019.



Peak ID: 1: Impurity C; 2: Impurity A; 3: Impurity B; 4: Doxycycline; 5: Impurity F.

Column	: Waters, XTerra RP18 (250 mm x 4.6 mm, 5 µm)
Solution A	: 11.16 % w/v solution of ethylenediaminetetracetic acid disodium salt dihydrate, adjusted to pH 7.0 with concentrated ammonia (35 %).
Buffer	: 6.79 % w/v tetrabutylammonium hydrogen sulfate solution adjusted to pH 7.0 with concentrated ammonia (35 %).
Mobile Phase	: Acetonitrile: water: buffer: solution A (13:17:35:35, v/v/v/v)
Diluent	: 0.01 M hydrochloric acid
Flow Rate	: 1.0 mL/min
Column Temp	: 35°C
Injection Volume	: 20 µL
Detection	: UV, 280 nm

Typical chromatogram for solution (2) in the Assay test for Doxycycline Tablets as published in BP 2019.



Peak ID: 1: Doxycyline

Column	: Waters, XTerra RP18 (250 mm x 4.6 mm, 5 µm)
Solution A	: 11.16 % w/v solution of ethylenediaminetetracetic acid disodium salt dihydrate, adjusted to pH 7.0 with concentrated ammonia (35 %).
Buffer	: 6.79 % w/v tetrabutylammonium hydrogen sulfate solution adjusted to pH 7.0 with concentrated ammonia (35 %).
Mobile Phase	: Acetonitrile: water: buffer: solution A (13:17:35:35, v/v/v/v)
Diluent	: 0.01 M hydrochloric acid
Flow Rate	: 1.0 mL/min
Column Temp	: 35°C
Injection Volume	: 20 µL
Detection	: UV, 280 nm