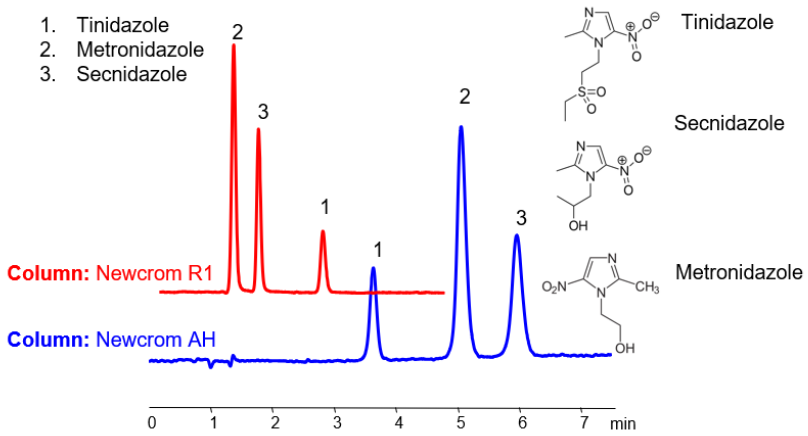
HPLC Method for Analysis of Mixture of Nitroimidazole Antibiotics on Newcrom Type Columns



Column size:	3.2 × 100 mm, 5 µm
Mobile phase:	MeCN/H_2O – 20/80%
Buffer:	H_3PO_4 – 0.1%
Flow rate:	0.5 mL/min
Detection:	UV 270 nm

Separation type: Bridge Ion Separation Technology, or BIST™ by SIELC Technologies

Tinidazole, metronidazole, and secnidazole are all nitroimidazole antibiotics used to treat bacterial and parasitic infections.

Metronidazole is the most commonly prescribed among the three and is used to treat a wide range of infections, including bacterial vaginosis, trichomoniasis, and certain types of anaerobic bacterial infections.

Tinidazole is similar to metronidazole in its mechanism of action and is used to treat similar infections, but it has a longer half-life and can be administered less frequently.

Secnidazole is a newer nitroimidazole antibiotic with a longer half-life than metronidazole, which allows for a shorter treatment duration. It is used to treat trichomoniasis and certain types of anaerobic bacterial infections.

It is important to note that these antibiotics can have side effects such as nausea, vomiting, and diarrhea, and should only be used as directed by a healthcare professional. Additionally, alcohol should be avoided while taking these medications as they can cause a severe reaction.

used to treat bacterial and parasitic infections.

These 3 nitroimidazole antibiotics can be separated and analyzed on a Newcrom AH (mixed-mode) and Newcrom R1 (reverse-phase) columns using an isocratic analytical method with a simple mobile phase of water, Acetonitrile (MeCN, ACN), and phosphoric acid buffer. The analysis method can be UV detected at 270 nm with high resolution and peak symmetry.

Method Parameters

Column	Newcrom AH, 3.2 x 100 mm, 5 µm, 100 Å, dual ended , Newcrom R1
Mobile Phase	MeCN – 20%
Buffer	H3PO4 – 0.1%
Flow Rate	0.5 mL/min
Detection	UV 270 nm

Quelle: https://sielc.com/hplc-method-for-analysis-of-nitroimidazole-antibiotics