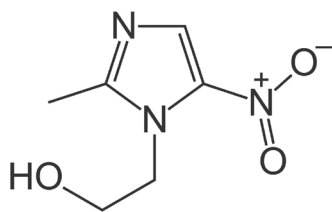
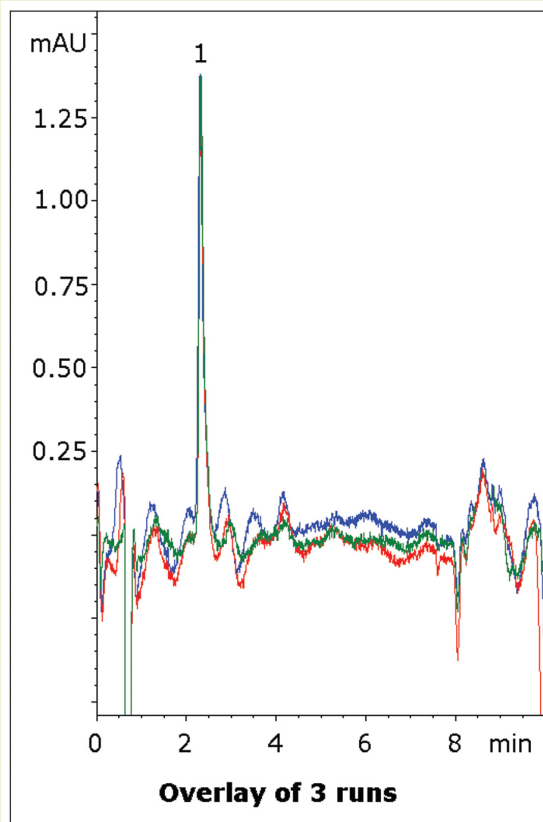


Metronidazole Topical Cream

Retention for highly polar API



Metronidazole

Note: Metronidazole is a nitroimidazole antibiotic agent. It is marketed under the trade names Flagyl®, Filmet®, and others.

Method Conditions

Column: Cogent Diamond Hydride™, 4µm, 100Å

Catalog No.: 70200-05P-2

Dimensions: 4.6 x 75 mm

Solvents: A: DI H₂O / 0.1% formic acid (v/v)

B: Acetonitrile / 0.1% formic acid (v/v)

Gradient:	time (min.)	%B
	0	95
	1.5	95
	6	50
	7	95

Post Time: 5 min

Injection vol.: 0.2µL

Flow rate: 0.3 mL/min

Detection: UV 254 nm

Sample: 250.0mg of 0.75% metronidazole topical cream was added to a 25mL volumetric flask containing a portion of 50/50 solvent A/solvent B diluent. After sonicating 30 min, it was diluted to mark. Then a portion was filtered using a 0.45µm nylon syringe filter (MicroSolv Tech Corp.).

Peak: 1. Metronidazole

t₀: 0.6 min

Discussion

This API has very little hydrophobic character and is not readily retained by reversed phase. However, polar compounds such as this can be easily assayed by HPLC using the Cogent Diamond Hydride 2.0 column. The peak that was obtained had excellent efficiency and symmetry.

Three runs are shown in the figure in order to illustrate the repeatability of the data.