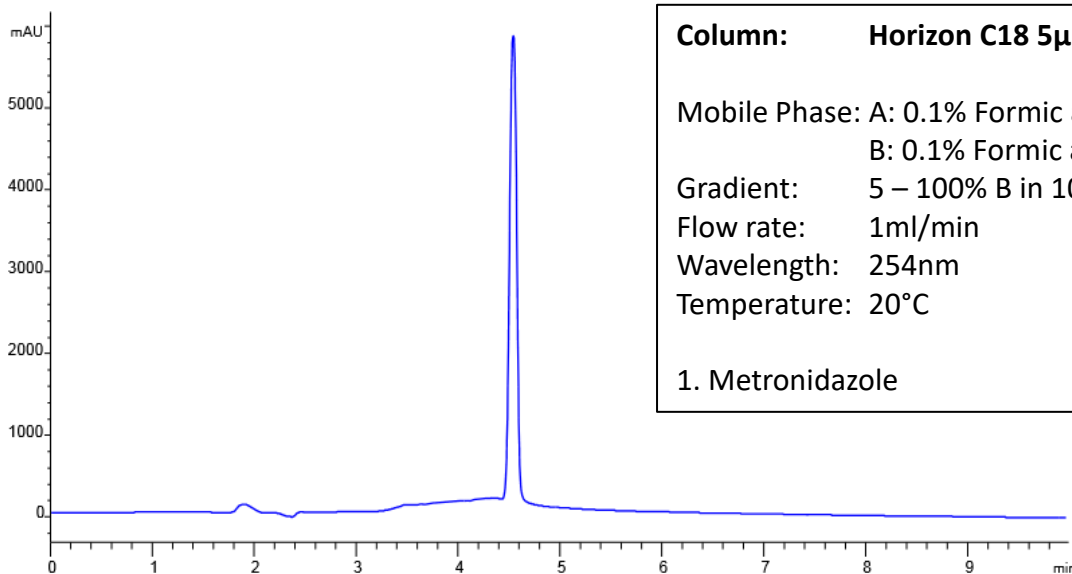
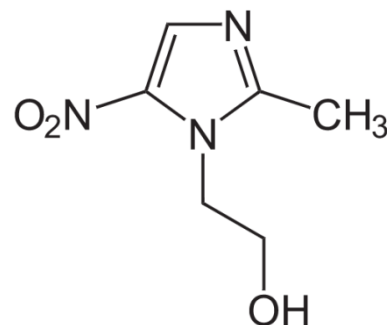


# Application Note: Metronidazole

Metronidazole is an antibiotic and antiprotozoal medication. It inhibits nucleic acid synthesis by forming nitroso radicals, which disrupt the DNA of microbial cells. This function only occurs when metronidazole is partially reduced, and because this reduction usually happens only in anaerobic bacteria and protozoans, it has relatively little effect upon human cells or aerobic bacteria.

About 60% of the metronidazole is metabolized by oxidation to the main metabolite hydroxymetronidazole and a carboxylic acid derivative, and by glucuronidation. The metabolites show antibiotic and antiprotozoal activity in vitro.

Metronidazole began to be commercially used in 1960. It is on the World Health Organization's List of Essential Medicines. In 2019, it was the 138th most commonly prescribed medication in the United States, with more than 4 million prescriptions



**Column:** Horizon C18 5 $\mu$  150x4.6mm

**Mobile Phase:** A: 0.1% Formic acid in Water

B: 0.1% Formic acid in MeCN

**Gradient:** 5 – 100% B in 10minutes

**Flow rate:** 1ml/min

**Wavelength:** 254nm

**Temperature:** 20°C

1. Metronidazole