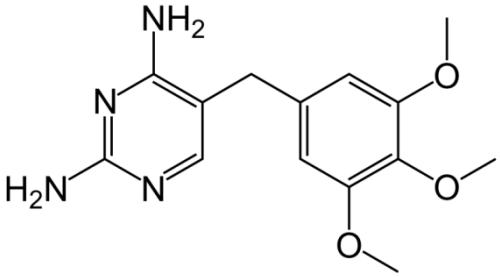
Application Note: Trimethoprim

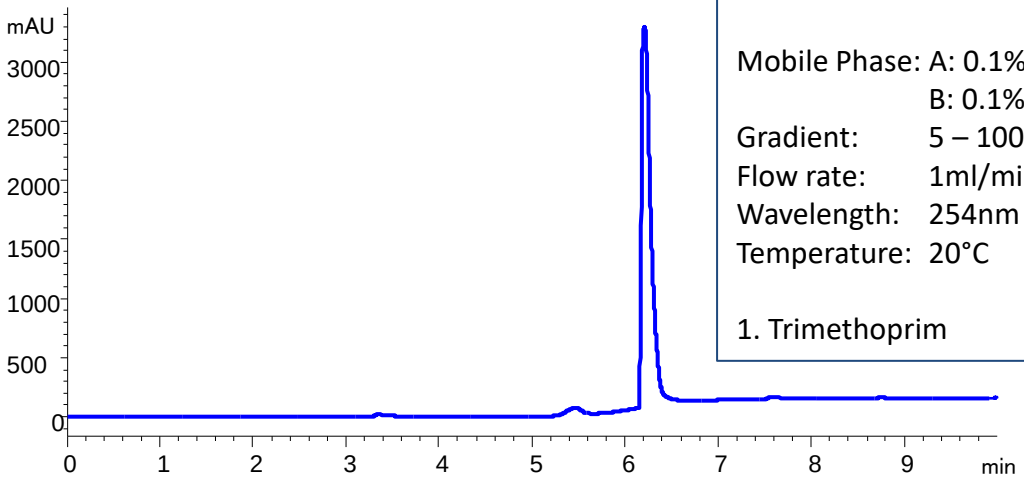
HORIZON CHROMATOGRAPHY LTD.

Trimethoprim (TMP) is an antibiotic used mainly in the treatment of bladder infections. Other uses include for middle ear infections and travellers' diarrhoea. With sulfamethoxazole or dapsone it may be used for Pneumocystis pneumonia in people with HIV/AIDS.



It works by blocking folate metabolism via dihydrofolate reductase in some bacteria which results in their death. Trimethoprim binds to dihydrofolate reductase and inhibits the reduction of dihydrofolic acid (DHF) to tetrahydrofolic acid (THF). THF is an essential precursor in the thymidine synthesis pathway and interference with this pathway inhibits bacterial DNA synthesis. Trimethoprim's affinity for bacterial dihydrofolate reductase is several thousand times greater than its affinity for human dihydrofolate reductase.

Trimethoprim was first used in 1962. It is on the World Health Organization's List of Essential Medicines, the safest and most effective medicines needed in a health system. It is available as a generic medication.



Column:	**Horizon C18 5µ 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. Trimethoprim

Application No: HZAP-0002