

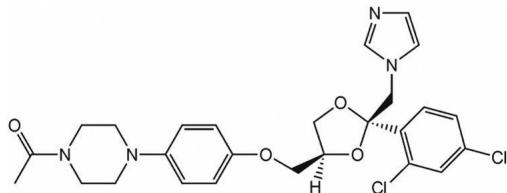
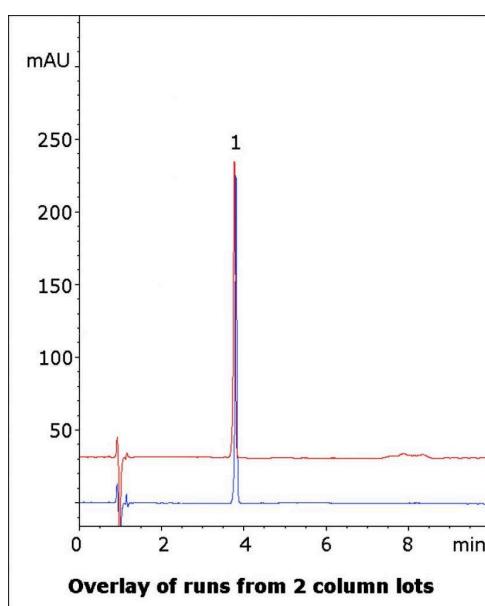


Ketoconazole Analyzed with HPLC - AppNote

Lipophilic Ketoconazole Retained using Aqueous Normal Phase HPLC

Ketoconazole is a significantly lipophilic molecule ($\log P \sim 3.8$) and is not generally suitable to ordinary Methods based on Hydrophilic Retention (*HILIC*). However, in this Method it is well retained using Aqueous Normal Phase (*Inverse Gradient*), therefore it is an Orthogonal Assay Method. This can be used in addition to standard Reversed Phase approaches since demonstrating orthogonality is very beneficial in a pharmaceutical analytical Method.

The data presented illustrates how this Method can be used to retain Hydrophobic Compounds very well and with Precision and Robustness as shown by the two overlaid Chromatograms from two different Column Lots.



Peak:

Ketoconazole

Method Conditions

Column: Cogent Diamond Hydride™, 4 μ m, 100 \AA

Catalog No.: 70000-7.5P

Dimensions: 4.6 x 75mm

Mobile Phase:

A: DI Water with 0.1% Trifluoroacetic Acid TFA (v/v)

B: Acetonitrile with 0.1% Trifluoroacetic Acid TFA (v/v)

Gradient:

Time (minutes)	%B
0	95
1	95
6	50
7	95

Post Time: 3 minutes

Injection vol.: 2 μ L

Flow rate: 1.0mL / minute

Detection: UV @ 225nm

Sample Preparation: 1mg Ketoconazole USP Reference Standard was dissolved in 1mL of 50:50 Solvent A / Solvent B. This stock Solution was diluted 1:10 for HPLC injections using the same diluent.

t₀: 0.9 minute.



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