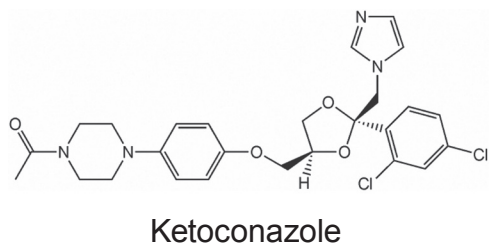
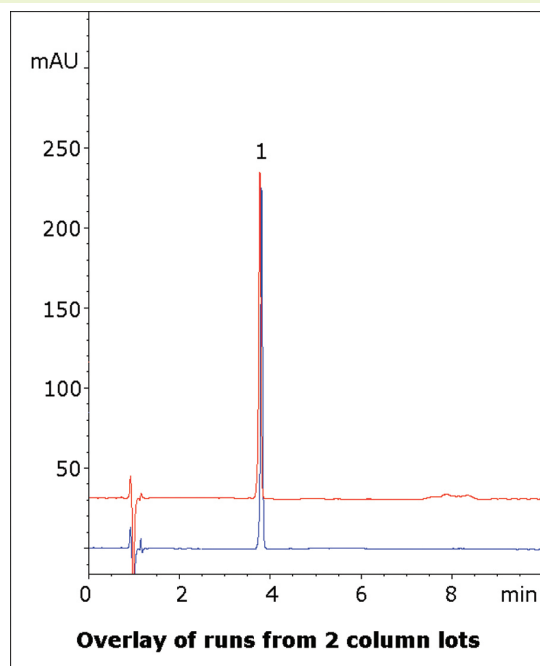


# Ketoconazole

## Orthogonal retention for lipophilic compound



**Note:** Ketoconazole is used for treatment of various topical fungal infections. Side effects of the drug can be used to treat non-fungal problems as well. It is available in trade names such as Nizoral®.

### Method Conditions

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

**Catalog No.:** 70000-7.5P

**Dimensions:** 4.6 x 75 mm

**Mobile Phase:** A: DI H<sub>2</sub>O / 0.1% TFA (v/v)  
B: Acetonitrile / 0.1% TFA (v/v)

Gradient:	time (min.)	%B
	0	95
	1	95
	6	50
	7	95

**Post Time:** 3 min

**Injection vol.:** 2µL

**Flow rate:** 1.0 mL/min

**Detection:** UV 225 nm

**Sample:** 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.

**Peak:** 1. Ketoconazole

**t<sub>0</sub>:** 0.9 min

### Discussion

Ketoconazole is a significantly lipophilic molecule (log P ~ 3.8) and is not generally suitable to ordinary methods based on hydrophilic retention. However, it is well-retained with the Cogent Diamond Hydride column and therefore an orthogonal assay method can be used in addition to standard reversed phase approaches. Demonstrating orthogonality is very beneficial in a pharmaceutical analytical method. This data illustrates how the Cogent Diamond Hydride column's applications are not limited to hydrophilic compounds only.