

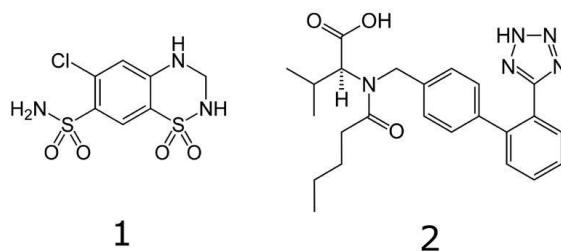
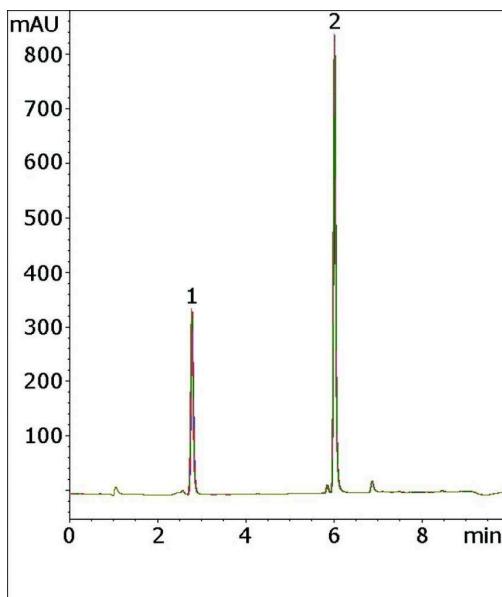


## Valsartan and Hydrochlorothiazide Analyzed with HPLC USP Comparison - AppNote

### Improved Gradient Method with Faster Equilibration

The USP Assay Method for Valsartan in combination with Hydrochlorothiazide features a 27 minute gradient with a 13 minute re-equilibration for a total run time of 40 minutes. In this method, the run time was a quarter of the USP method, and the Column equilibrates much faster when gradients are used. This demonstrates a substantial time and solvent savings for the analytical laboratory.

Five Chromatograms are overlaid below which shows the Robustness and Precision of this Method.



#### Peaks:

1. Hydrochlorothiazide (HCT)
2. Valsartan

### Method Conditions

**Column:** Cogent Bidentate C18™, 4µm, 100Å

**Catalog No.:** 40018-75P

**Dimensions:** 4.6 x 75mm

**Mobile Phase:**

A: DI Water / 0.1% Trifluoroacetic Acid (TFA)  
B: Acetonitrile / 0.1% Trifluoroacetic Acid (TFA)

**Gradient:**

Time (minutes)	%B
0	10
8	90
9	10

**Post Time:** 1 minute

**Injection vol.:** 10 $\mu$ L

**Flow rate:** 1.0ml / minute

**Detection:** UV @ 265nm

**Sample Preparation:**

**Stock Solution:** A Diovan® HCT brand tablet containing 160mg Valsartan and 25 mg Hydrochlorothiazide was ground and added to a 50 mL volumetric flask. The flask was diluted to mark with 50:50 Solvent A / Solvent B mixture and sonicated. A portion was then filtered with a 0.45 $\mu$ m Nylon Syringe Filter AQ™ Brand (MICROSOLV Tech Corp.).

**Working Solution:** 100 $\mu$ L of the stock solution was diluted with 900 $\mu$ L of a 50:50 Solvent A / Solvent B mixture.

**t<sub>0</sub>:** 1 minute

**Comparison of This Method and the USP Method**

	Bidentate C18	Ordinary C18
Total Run Time	10 Minutes	40 Minutes
Column Volume Equilibration	1 Column	10 Columns
Solvent Usage per Run	10ml	40ml

**Attachment No 150 Valsartan and Hydrochlorothiazide Analyzed with HPLC pdf 0.5 Mb**

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