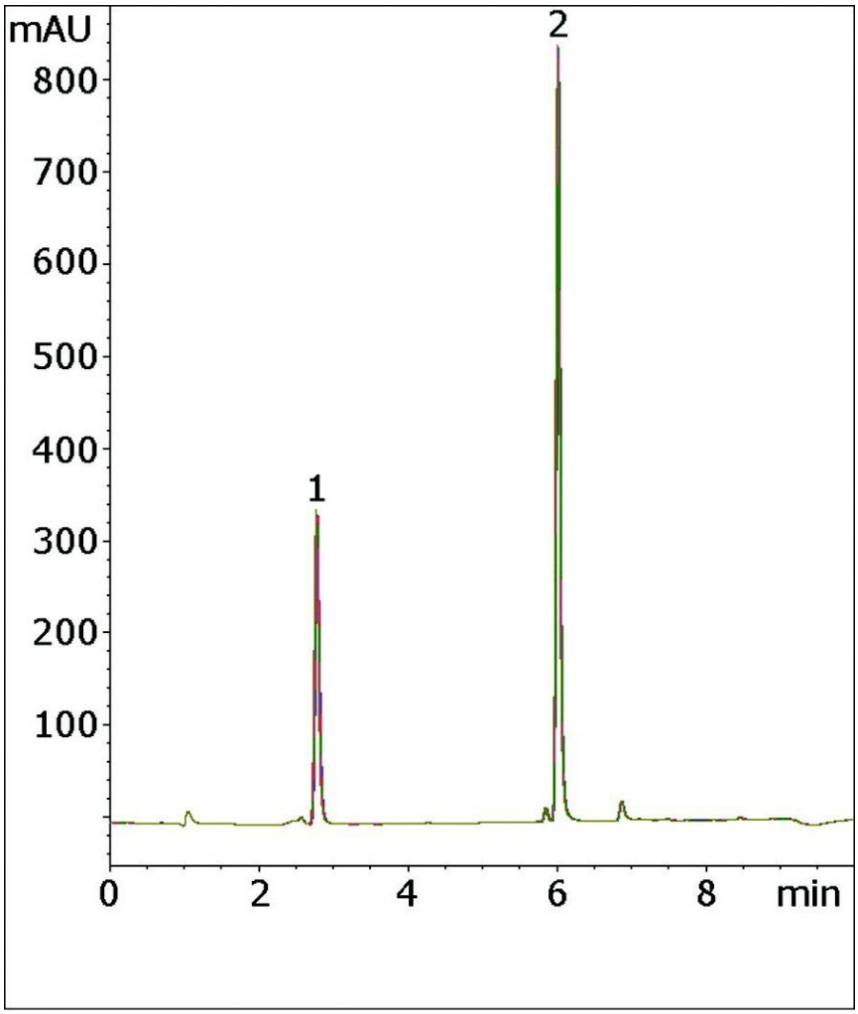
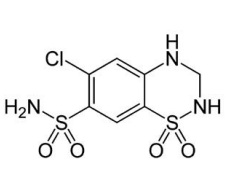
Valsartan and Hydrochlorothiazide Analyzed with HPLC – AppNote

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.





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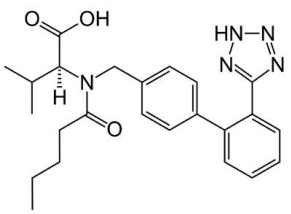

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Peaks:

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.: 10µL

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 0.45µm Nylon Syringe Filter AQ™ Brand (MicroSolv Tech Corp.).

Working Solution: 100µL of the stock solution was diluted with 900µL of a 50:50 Solvent A / Solvent B mixture.

t0: 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 - Download File

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