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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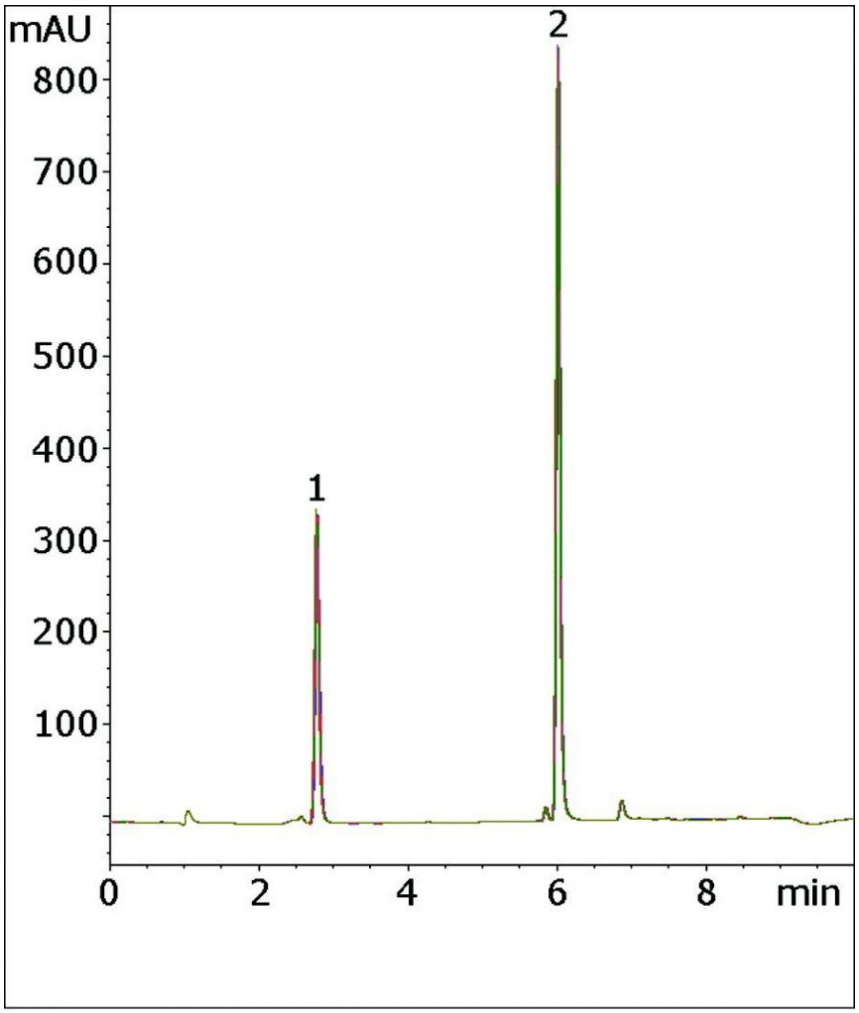

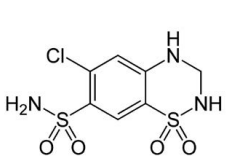

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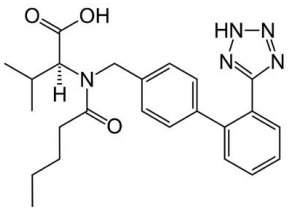

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Peaks:

1. Hydrochlorothiazide *(HCT)*
2. Valsartan

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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.
t_0: 1 minute

Comparison of This Method and the USP Method		
	Bidentate C18	Ordinary C18
Total Run Time	10 Minutes	40 Minutes

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Column Volume Equilibration	1 Column	10 Columns
Solvent Usage per Run	10ml	40ml

COGENT HPLC Columns™

Attachment

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