

HPLC-UV Method for the Determination of Telmisartan Using a Synchronis C8 1.7 μm Column

Eilidh MacRitchie, Thermo Fisher Scientific, Runcorn, Cheshire, UK

Abstract

This application note demonstrates the use of the Thermo Scientific Synchronis C8 1.7 μm column for the determination of telmisartan by HPLC-UV.

Introduction

One of the key goals for the chromatographer is to achieve a consistent, reproducible separation. The selection of a highly reproducible HPLC column is essential if this goal is to be attained. The Synchronis™ column range has been engineered to provide exceptional reproducibility due to its highly pure, high surface area silica, dense bonding and double endcapping, all controlled and characterized through the use of rigorous testing.

Telmisartan is an angiotension II receptor antagonist used for the treatment of hypertension.

This application note demonstrates the successful analysis of telmisartan using a Synchronis C8 1.7 μm column.



Experimental Details

Chemicals and Reagents	Part Number
Fisher Scientific HPLC grade water	W/0106/17
Fisher Scientific HPLC grade ammonium acetate	A/3446/50
Fisher Scientific HPLC grade acetonitrile	A/0626/17
Telmisartan purchased from Sigma Aldrich	

Sample Handling Equipment

NSC Mass Spec Certified 2 mL clear vial with blue bonded PTFE silicone cap	MSCERT4000-34W
--	----------------

Separation Conditions	Part Number	
Instrumentation:	Thermo Scientific Accela UHPLC system	
Column:	Synchronis C8 1.7 μm , 50 x 2.1 mm	97202-052130
Mobile phase:	65:35 (v/v) 20 mM ammonium acetate/acetonitrile	
Flow rate:	0.2 mL/min	
Column temperature:	25 °C	
Injection details:	1 μL partial loop	
Injection wash solvent:	65:35 (v/v) 20 mM ammonium acetate/acetonitrile	
UV detector wavelength:	230 nm	
Backpressure:	215 bar	

Solutions

Working standard contained 20 $\mu\text{g}/\text{mL}$ of telmisartan in water

Key Words

- Telmisartan
- Synchronis C8
- Hypertension
- High speed

Results

The analysis was performed on a Syncronis C8 1.7 μm , 50 x 2.1 mm column. As shown in Figure 1, telmisartan was analyzed in less than 3 minutes. Table 1 shows the results from six replicate injections.

	Telmisartan
Retention time (minutes)	1.98
%RSD on retention time	0.3
Asymmetry	1.39
%RSD on asymmetry	0.4

Table 1: Retention time and asymmetry results for telmisartan

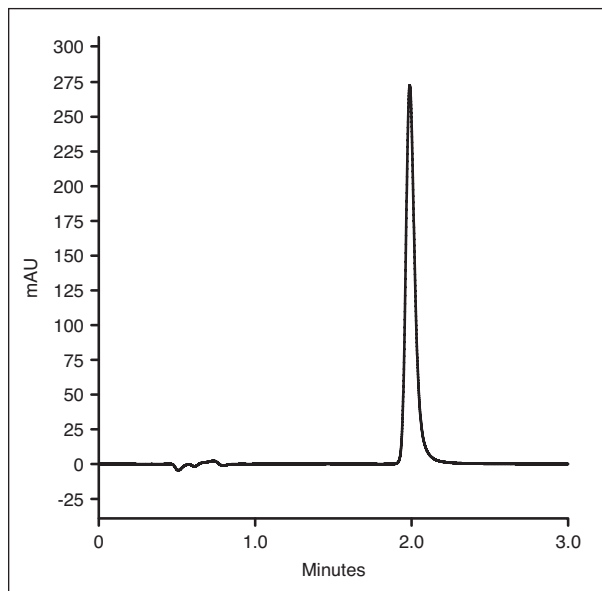


Figure 1: Chromatogram of telmisartan analyzed using a Syncronis C8 1.7 μm , 50 x 2.1 mm column

Conclusions

Replicate injections of telmisartan showed that Syncronis C8 1.7 μm produced stable and reproducible results. This demonstrates that Syncronis C8 is an excellent choice of column for the rapid analysis of telmisartan.

In addition to these offices, Thermo Fisher Scientific maintains a network of representative organizations throughout the world.

**North America
USA and Canada**
+1 800 332 3331

**Europe
France**
+33 (0)1 60 92 48 34

Germany
+49 (0) 2423 9431 -20
or -21

United Kingdom
+44 1928 534110

**Asia
Japan**
+81 3 5826 1615

China
+86-21-68654588
or +86-10-84193588
800-810-5118

India
+91-22-6742 9494

**Thermo Fisher
Scientific Australia
Pty Ltd**
1300 735 292 (free call
domestic)

**Thermo Fisher
Scientific New
Zealand Ltd**
0800 933 966 (free call
domestic)

All Other Enquiries
+44 (0) 1928 534 050

Technical Support

North America
800 332 3331

**Outside North
America**
+44 (0) 1928 534 440

www.thermoscientific.com/chromatography

© 2011 Thermo Fisher Scientific Inc. All rights reserved. All trademarks are the property of Thermo Fisher Scientific Inc. and its subsidiaries. Specifications, terms and pricing are subject to change. Not all products are available in all countries. Please consult your local sales representative for details.

ANCCSTELMISSYNC 1211