

Exploring the Separation Capabilities for New Halogen Containing Carbohydrate Based Chiral Stationary Phases

Matthew Przybyciel, PhD

ES Industries

701 South Route 73

West Berlin, NJ 08091

www.esind.com

Introduction

The chromatographic separation of chiral compounds is an important tool in the search for new pharmaceutical entities. Both HPLC and SFC separations of chiral chemicals are important tools for analytical determination and preparative isolation of enantiomeric mixtures. Existing chiral stationary phases can separate a wide variety of chiral mixtures. However there are still enantiomeric mixtures that are difficult to separate limiting their characterization. It is the focus of this study to characterize and understand the separation capabilities for new carbohydrate based chiral stationary phases contain halogens that we have developed.

ChromegaChiral CC2

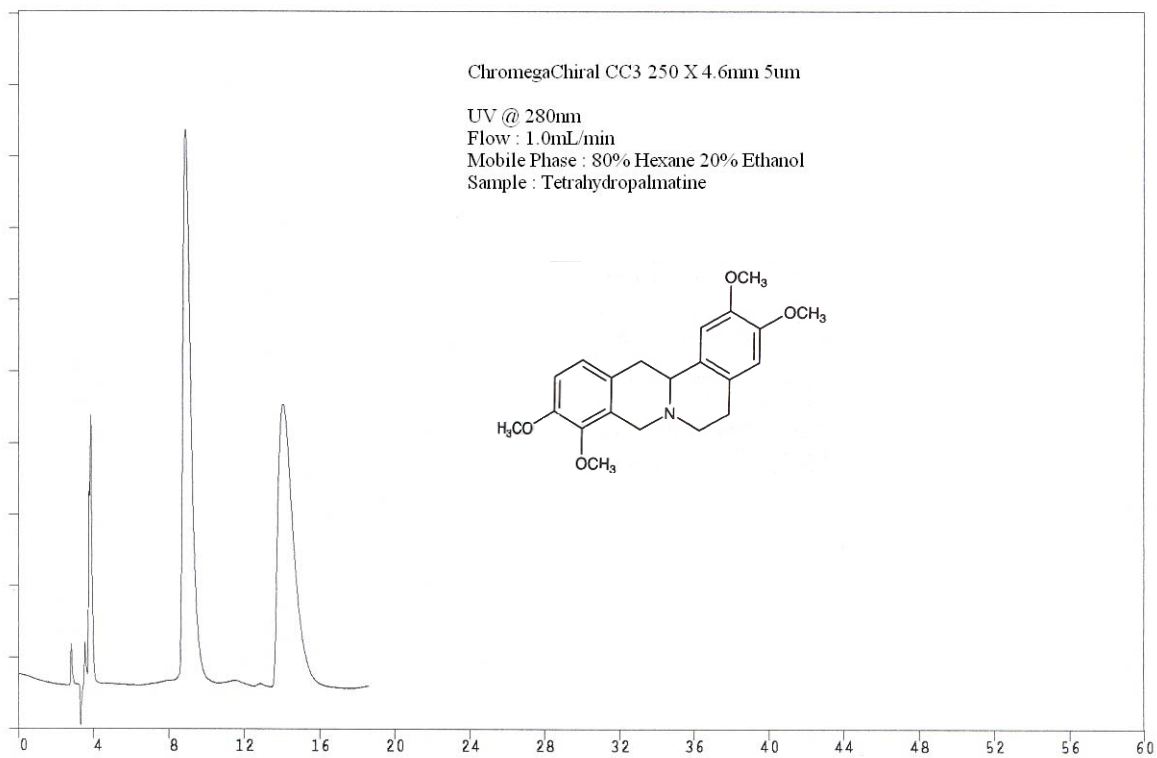
Cellulose tris (3-chloro-4-methylphenylcarbamate)

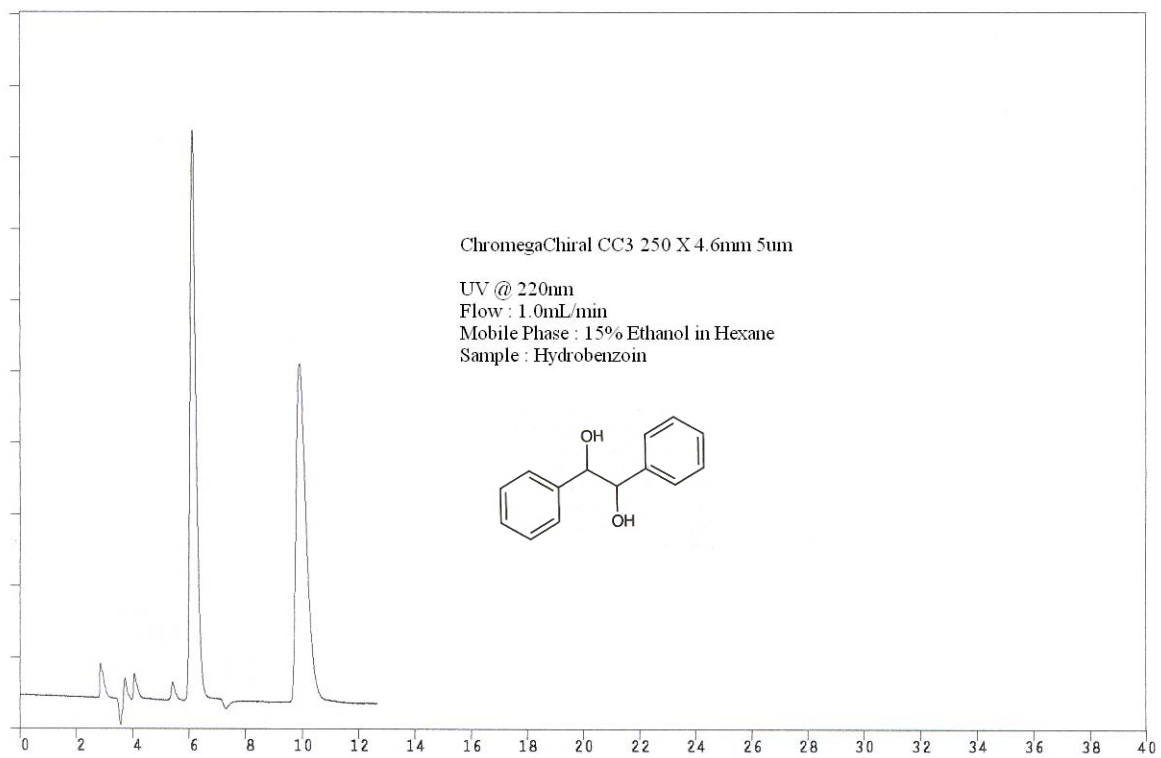
ChromegaChiral CC3

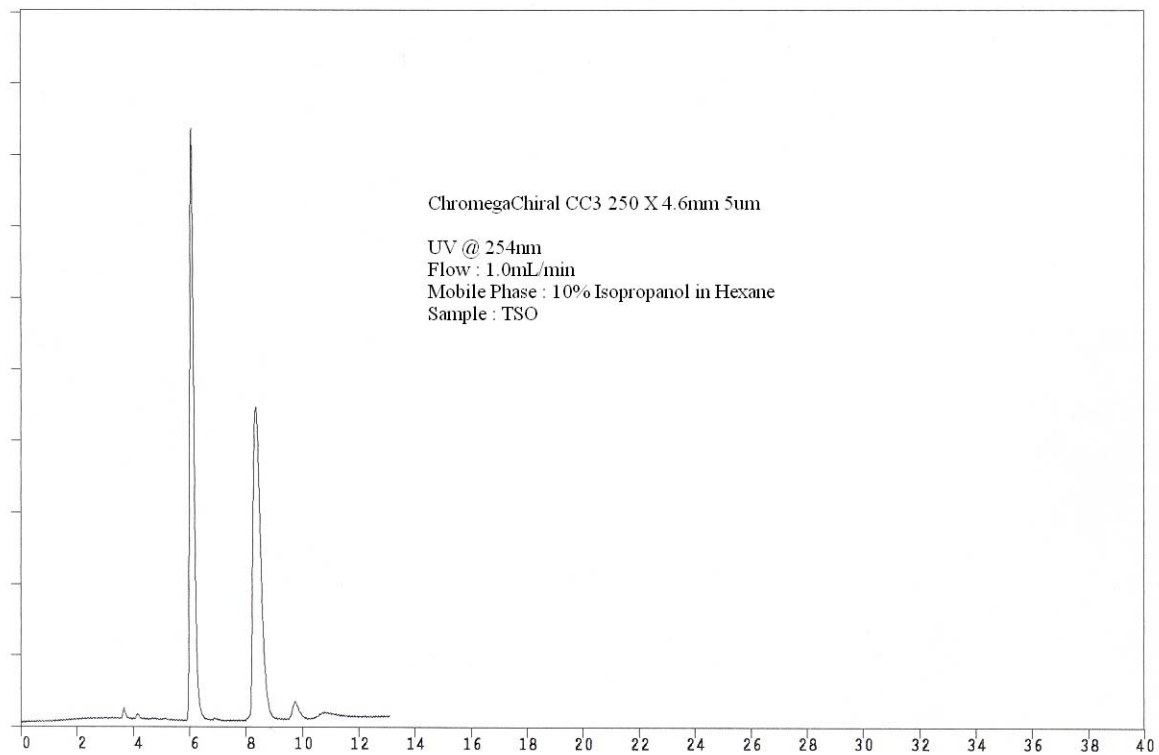
Amylose tris(5-chloro-2-methylphenylcarbamate)

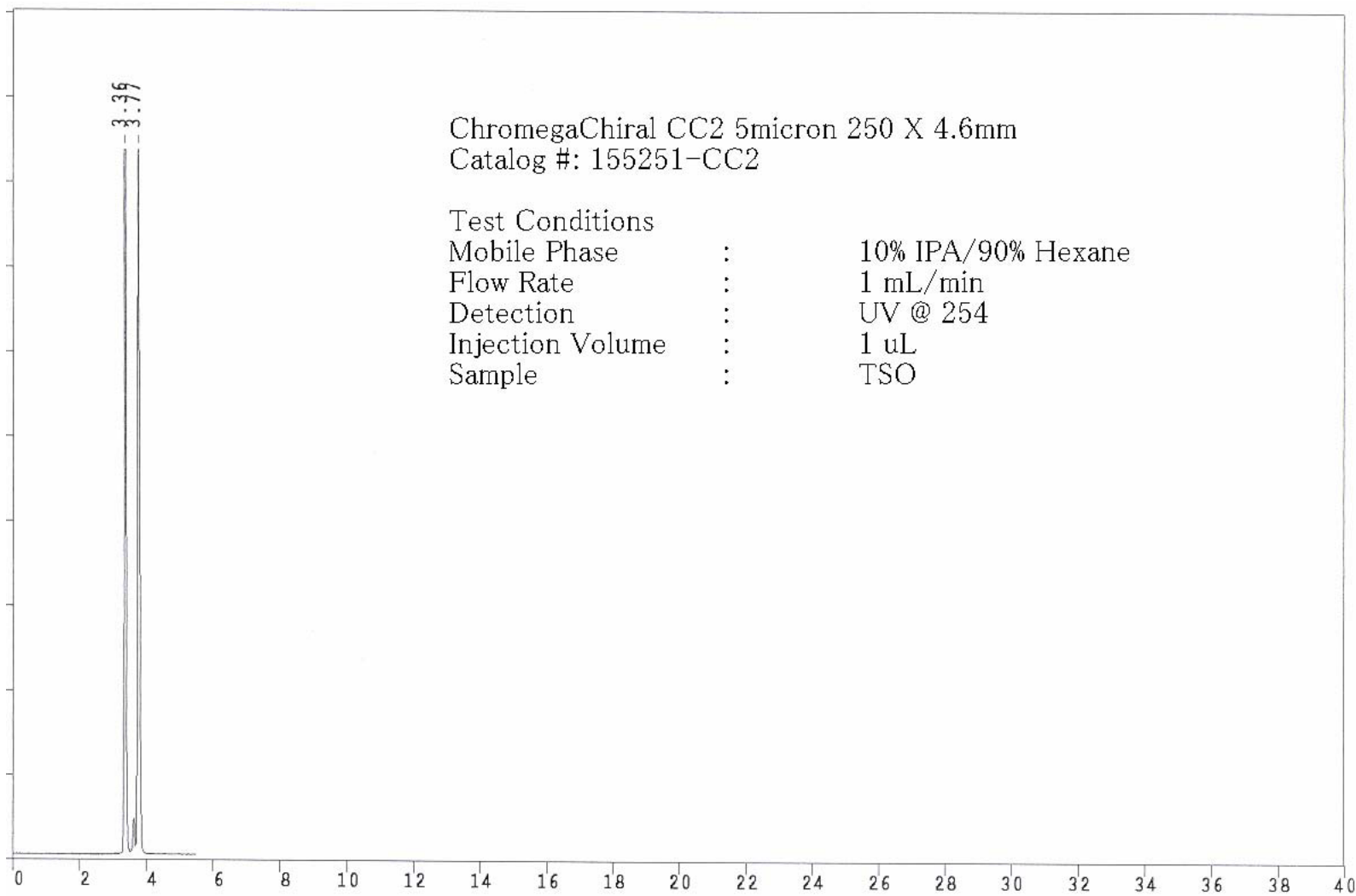
ChromegaChiral CC4

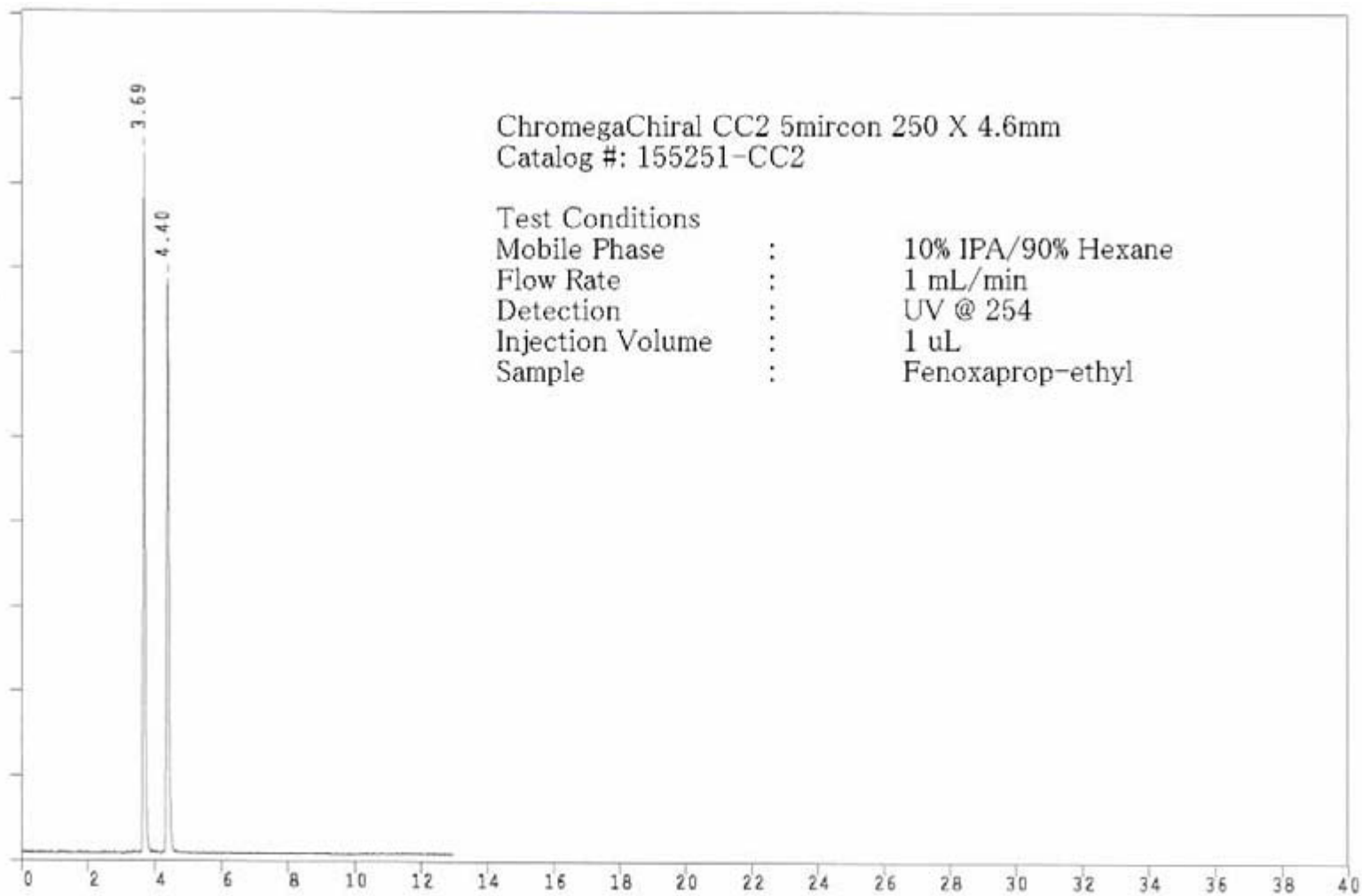
Cellulose tris (4-chloro-3-
methylphenylcarbamate)





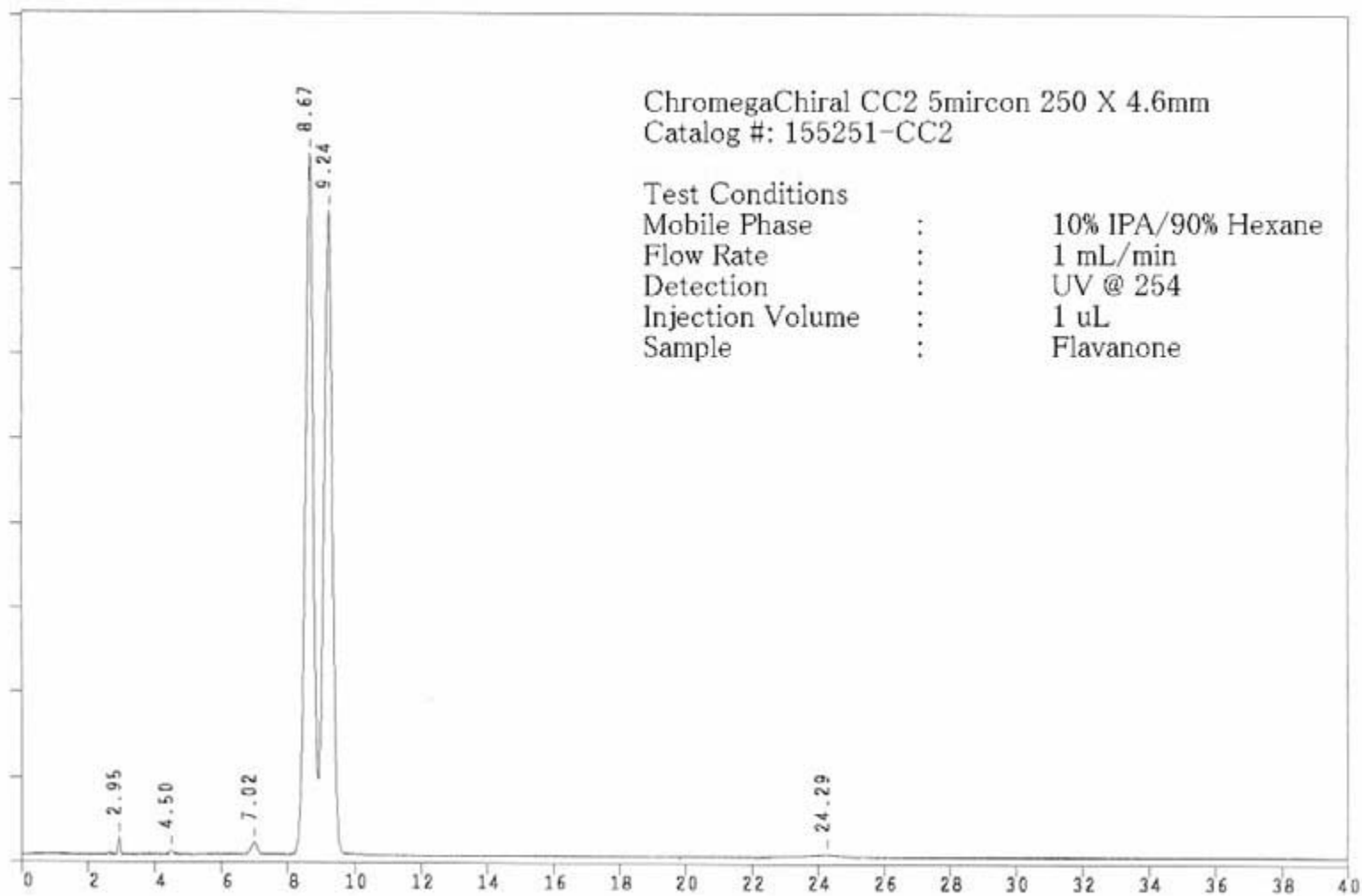






ChromegaChiral CC2 5micron 250 X 4.6mm
Catalog #: 155251-CC2

Test Conditions
Mobile Phase : 10% IPA/90% Hexane
Flow Rate : 1 mL/min
Detection : UV @ 254
Injection Volume : 1 uL
Sample : Fenoxaprop-ethyl



ChromegaChiral CC2 5micron 250 X 4.6mm
Catalog #: 155251-CC2

Test Conditions

Mobile Phase : 10% IPA/90% Hexane
Flow Rate : 1 mL/min
Detection : UV @ 254
Injection Volume : 1 uL
Sample : Flavanone

Conclusions

New halogen carbohydrate based stationary phases will provide the chromatographer with additional separation tools