

APPLICATIONS

Chiral Separation of Chlormezanone with a Lux[®] i-Amylose-3 Chiral Stationary Phase by HPLC under Polar Organic Mobile Phase Conditions

James Hseu, J Preston, and Ryan Splitstone
Phenomenex, Inc., 411 Madrid Ave., Torrance, CA 90501 USA

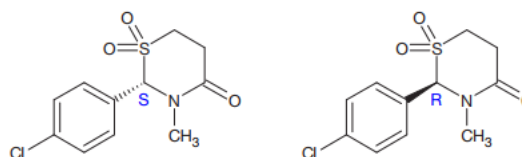
Overview

In this application note, a chiral screening mobile phase conditions was used on the Lux i-Amylose-3 immobilized polysaccharide-based chiral stationary phase to separate a racemic mixture of Chlormezanone. Chlormezanone is used in the as an anxiolytic agent and contains a stereogenic center and is chiral. The therapeutic use of Chlormezanone has increased interest in the development of an efficient and fast HPLC method that could resolve its enantiomeric compounds. To resolve the enantiomers a general screening polar organic mobile phase conditions of Acetonitrile with 0.1 % Diethylamine was used. An Agilent[®] 1100 (Santa Clara, CA) HPLC system with an injection volume of 10 μ L and a flow rate of 1.0 mL/min was used for this example and resulted in a selectivity factor of $\alpha = 1.37$. The Lux i-Amylose-3 chiral selector is a complementary but distinct chiral selectivity in comparison to i-Amylose-1 and i-Cellulose-5. It combines the 5-position methyl group of the i-Amylose-3 chiral selector with the electron-withdrawing potential of the i-Cellulose-5, 3-position chlorine group. Combined with the strong solvent flexibility of the immobilization process the Lux i-Amylose-3 column's broad enantioselectivity promotes greater chiral separation success.

LC Conditions

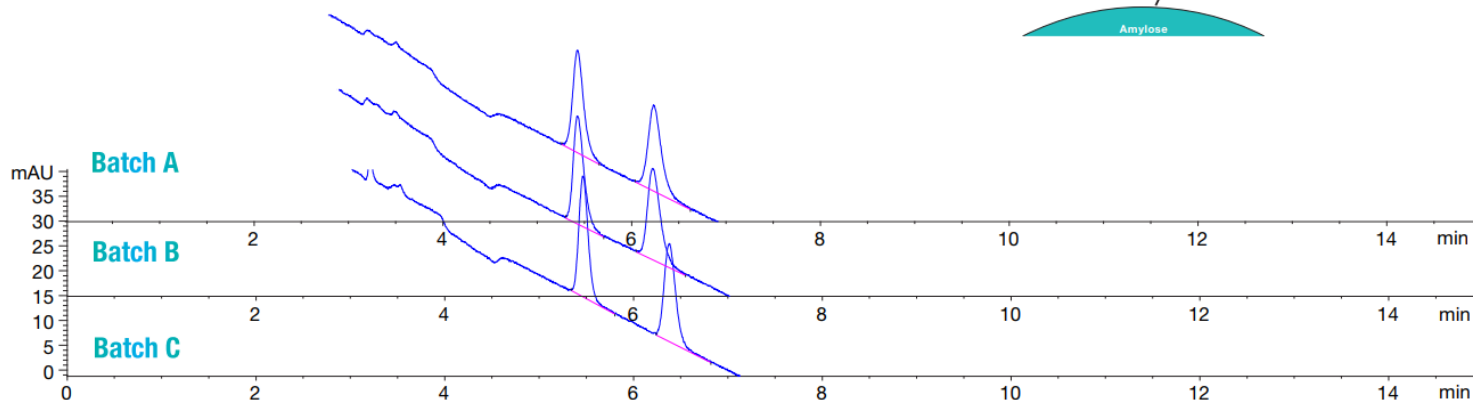
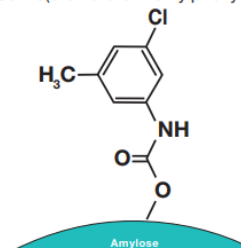
Column: Lux 5 μ m i-Amylose-3
Dimensions: 250 x 4.6 mm
Part No.: 00G-4779-E0
Recommended Guard: SecurityGuard[™]
Guard Holder Part No.: KJ0-4282
Guard Cartridge Part No.: AJ0-8650
Mobile Phase: Acetonitrile with 0.1 % Diethylamine
Flow Rate: 1.0 mL/min
Injection Volume: 10 μ L (2 mg/mL)
Detection: UV-Vis @ 254 nm
Sample: 1. Chlormezanone
 2. Chlormezanone

Enantiomers of Chlormezanone



Lux i-Amylose-3

Amylose tris(3-chloro-5-methylphenylcarbamate)



APPLICATIONS

Need a different column size or sample preparation format?

No problem! We have a majority of our available dimensions up on www.phenomenex.com, but if you can't find what you need right away, our super helpful Technical Specialists can guide you to the solution via our online chat portal www.phenomenex.com/LiveChat.

Australia

t: +61 (0)2-9428-6444
auiinfo@phenomenex.com

Austria

t: +43 (0)1-319-1301
anfrage@phenomenex.com

Belgium

t: +32 (0)2 503 4015 (French)
t: +32 (0)2 511 8666 (Dutch)
beinfo@phenomenex.com

Canada

t: +1 (800) 543-3681
info@phenomenex.com

China

t: +86 400-606-8099
cninfo@phenomenex.com

Denmark

t: +45 4824 8048
nordicinfo@phenomenex.com

Finland

t: +358 (0)9 4789 0063
nordicinfo@phenomenex.com

France

t: +33 (0)1 30 09 21 10
franceinfo@phenomenex.com

Germany

t: +49 (0)6021-58830-0
anfrage@phenomenex.com

India

t: +91 (0)40-3012 2400
indiainfo@phenomenex.com

Ireland

t: +353 (0)1 247 5405
eireinfo@phenomenex.com

Italy

t: +39 051 6327511
italiainfo@phenomenex.com

Luxembourg

t: +31 (0)30-2418700
nlinfo@phenomenex.com

Mexico

t: 01-800-844-5226
tecnicomx@phenomenex.com

The Netherlands

t: +31 (0)30-2418700
nlinfo@phenomenex.com

New Zealand

t: +64 (0)9-4780951
nzinfo@phenomenex.com

Norway

t: +47 810 02 005
nordicinfo@phenomenex.com

Portugal

t: +351 221 450 488
ptinfo@phenomenex.com

Singapore

t: +65 800-852-3944
sginfo@phenomenex.com

Spain

t: +34 91-413-8613
espinfo@phenomenex.com

Sweden

t: +46 (0)8 611 6950
nordicinfo@phenomenex.com

Switzerland

t: +41 (0)61 692 20 20
swissinfo@phenomenex.com

Taiwan

t: +886 (0) 0801-49-1246
twinfo@phenomenex.com

United Kingdom

t: +44 (0)1625-501367
ukinfo@phenomenex.com

USA

t: +1 (310) 212-0555
info@phenomenex.com

All other countries Corporate Office USA

t: +1 (310) 212-0555
info@phenomenex.com

www.phenomenex.com

Phenomenex products are available worldwide. For the distributor in your country, contact Phenomenex USA, International Department at international@phenomenex.com



Your happiness is our mission. Take 45 days to try our products. If you are not happy, we'll make it right.
www.phenomenex.com/behappy

Terms and Conditions

Subject to Phenomenex Standard Terms and Conditions, which may be viewed at www.phenomenex.com/TermsAndConditions.

Trademarks

Lux is a registered trademark SecurityGuard and BE-HAPPY are trademarks of Phenomenex. Agilent is a registered trademark of Agilent Technologies, Inc.

Disclaimer

Comparative separation may not be representative of all applications.

Phenomenex is not affiliated with Agilent Technologies, Inc.

SecurityGuard is patented by Phenomenex. U.S. Patent No. 6,162,362

CAUTION: this patent only applies to the analytical-sized guard cartridge holder, and does not apply to SemiPrep, PREP or ULTRA holders, or to any cartridges.

FOR RESEARCH USE ONLY. Not for use in clinical diagnostic procedures.

© 2020 Phenomenex, Inc. All rights reserved.