APPLICATION

Separation of Ephedrine and Pseudoephedrine Enantiomers Using a Lux® 3 µm AMP Chiral Column

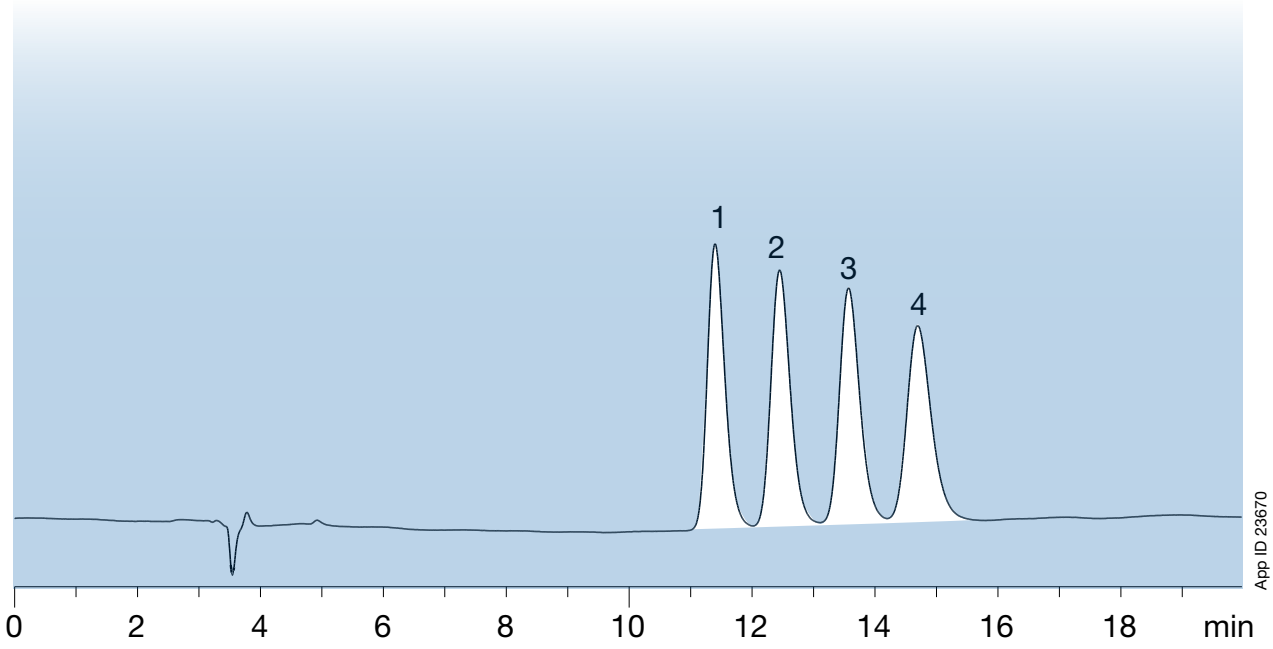
Abraham Becerra and Simon Lomas
Phenomenex, Inc., 411 Madrid Ave., Torrance, CA 90501 USA

Overview

Pseudoephedrine is a diastereomer of ephedrine and is readily reduced into methamphetamine, a schedule II controlled substance, or oxidized into methcathinone, a schedule I controlled substance. A fast and effective method was developed to separate all four compounds using a Lux 3 µm AMP column. This novel and high-performance chiral stationary phase gives excellent selectivity for these four compounds resulting in baseline resolution between all four peaks.

LC/UV Conditions

Column: Lux 3 µm AMP
Dimensions: 150 x 4.6 mm
Part No.: 00F-4751-E0
Mobile Phase: 5 mM Ammonium Bicarbonate adjusted to pH 11 with Ammonium Hydroxide/Methanol/Acetonitrile/Isopropanol (65:20:10:5)
Flow Rate: 0.5 mL/min
Temperature: Ambient
Detection: UV @ 210 nm
Sample: 1. 1S,2R (+) - Ephedrine HCl
2. 1R,2S (-) - Ephedrine HCl
3. R,R (-) - Pseudoephedrine
4. S,S (+) - Pseudoephedrine



Lux AMP Ordering Information

Lux® 3 µm Analytical Columns			SecurityGuard™ ULTRA Cartridges‡	
Phase	150 x 3.0	150 x 4.6	3/pk	3/pk
AMP	00F-4751-Y0	00F-4751-E0	AJ0-9510	AJ0-9509

‡SecurityGuard ULTRA Cartridges require holder, Part No.: AJ0-9000

Australia
t: +61 (0)2-9428-6444
f: +61 (0)2-9428-6445
auinfo@phenomenex.com

Austria
t: +43 (0)1-319-1301
f: +43 (0)1-319-1300
anfrage@phenomenex.com

Belgium
t: +32 (0)2 503 4015 (French)
t: +32 (0)2 511 8666 (Dutch)
f: +31 (0)30-2383749
beinfo@phenomenex.com

Canada
t: +1 (800) 543-3681
f: +1 (310) 328-7768
info@phenomenex.com

China
t: +86 (0)20 2282-6668
f: +86 (0)20 2809-8130
chinainfo@phenomenex.com

Denmark
t: +45 4824 8048
f: +45 4810 6265
nordicinfo@phenomenex.com

Finland
t: +358 (0)9 4789 0063
f: +45 4810 6265
nordicinfo@phenomenex.com

France
t: +33 (0)1 30 09 21 10
f: +33 (0)1 30 09 21 11
franceinfo@phenomenex.com

Germany
t: +49 (0)6021-58830-0
f: +49 (0)6021-58830-11
anfrage@phenomenex.com

India
t: +91 (0)40-3012 2400
f: +91 (0)40-3012 2411
indiainfo@phenomenex.com

Ireland
t: +353 (0)1 247 5405
f: +44 1625-501796
eireinfo@phenomenex.com

Italy
t: +39 051 6327511
f: +39 051 6327555
italiainfo@phenomenex.com

Luxembourg
t: +31 (0)30-2418700
f: +31 (0)30-2383749
nlinfo@phenomenex.com

Mexico
t: 01-800-844-5226
f: 001-310-328-7768
tecnicomx@phenomenex.com

The Netherlands
t: +31 (0)30-2418700
f: +31 (0)30-2383749
nlinfo@phenomenex.com

New Zealand
t: +64 (0)9-4780951
f: +64 (0)9-4780952
nzinfo@phenomenex.com

Norway
t: +47 810 02 005
f: +45 4810 6265
nordicinfo@phenomenex.com

Puerto Rico
t: +1 (800) 541-HPLC
f: +1 (310) 328-7768
info@phenomenex.com

Spain
t: +34 91-413-8613
f: +34 91-413-2290
espinfo@phenomenex.com

Sweden
t: +46 (0)8 611 6950
f: +45 4810 6265
nordicinfo@phenomenex.com

United Kingdom
t: +44 (0)1625-501367
f: +44 (0)1625-501796
ukinfo@phenomenex.com

USA
t: +1 (310) 212-0555
f: +1 (310) 328-7768
info@phenomenex.com

All other countries
Corporate Office USA
t: +1 (310) 212-0555
f: +1 (310) 328-7768
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

guarantee

If Phenomenex products in this technical note do not provide at least an equivalent separation as compared to other products of the same phase and dimensions, return the product with comparative data within 45 days for a FULL REFUND.

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

Trademarks
Phenomenex and Lux are registered trademarks and SecurityGuard is a trademark of Phenomenex.

Comparative separations may not be representative of all applications.

© 2016 Phenomenex, Inc. All rights reserved.

TN43640716_W