

APPLICATIONS

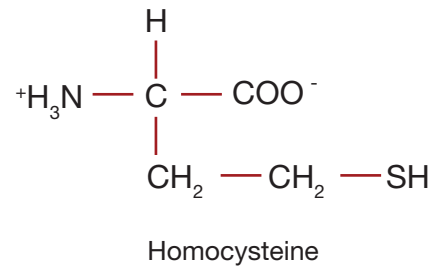


LC/MS/MS Analysis of Homocysteine using Luna[®] Omega 1.6 μm PS C18 UHPLC Column

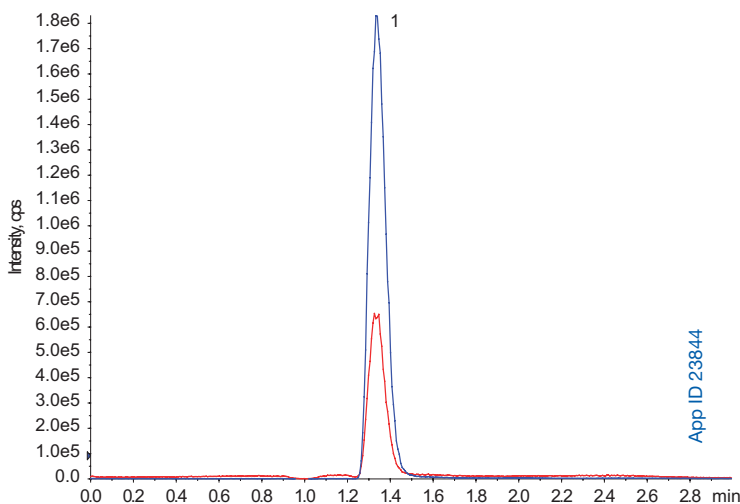
Laura Snow
Phenomenex, Inc., 411 Madrid Ave., Torrance, CA 90501 USA

Overview

Homocysteine is a sulphur containing amino acid (C₄H₉NO₂S) found in blood plasma and serum.¹ This application illustrates a rapid retention and resolution of Homocysteine using a Luna Omega 1.6 μm PS C18 column. Luna Omega PS C18 is a unique mixed-mode stationary phase that provides incredibly useful polar and non-polar retention. The surface of the PS C18 contains a positive charge which aids in the retention of acidic compounds through ionic interactions, while the C18 ligand promotes general reversed phase retention. This mixed-mode selectivity allows for greater separation between compounds with varying functional groups. With its positive surface (PS) the Luna Omega PS C18 provides valuable increase in retention of acids like Homocysteine through ionic/polar interactions.



Representative Chromatogram of Homocysteine



LC/MS/MS Methodology

Column: Luna Omega 1.6 μm PS C18
Dimensions: 100 x 2.1 mm
Part No.: 00D-4752-AN
Mobile Phase: A: 0.1% Formic Acid in Water
 B: 0.1% Formic Acid in Methanol

Gradient Time (min)	% B
0	2
2	30
2.01	90
2.5	90
2.51	2
3	2

Flow Rate: 0.4 mL/min
Temperature: 22 °C
Detection: MS/MS (SCIEX Triple Quad™ 4500) (600 °C)
Sample: 1. Homocysteine



APPLICATIONS

Luna® Omega Ordering Information

1.6 µm Minibore Columns (mm)					SecurityGuard™ ULTRA Cartridges†
Phases	30 x 2.1	50 x 2.1	100 x 2.1	150 x 2.1	3/pk
PS C18	00A-4752-AN	00B-4752-AN	00D-4752-AN	00F-4752-AN	AJO-9508 for 2.1 mm ID

† SecurityGuard ULTRA Cartridges require holder, Part No.: AJO-9000

5 µm Minibore Columns (mm)					SecurityGuard Cartridges (mm)
Phases	30 x 2.1	50 x 2.1	100 x 2.1	150 x 2.1	4 x 2.0*
PS C18	00A-4753-AN	00B-4753-AN	00D-4753-AN	00F-4753-AN	AJO-7605 for ID: 2.0 - 3.0 mm

* SecurityGuard Analytical Cartridges require holder, Part No.: KJO-4282

Australia

t: +61 (0)2-9428-6444
f: +61 (0)2-9428-6445
auiinfo@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

www.phenomenex.com

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

Reference

1. Carmel, R, Jacobsen, DW. Homocysteine in Health and Disease. Cambridge University Press, Cambridge, 2001.



If Luna analytical columns do not provide at least an equivalent separation as compared to a competing column of the same particle size, similar phase and dimensions, return the column 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

Luna is a registered trademark and SecurityGuard is a trademark of Phenomenex. TripleQuad™ 4500 is a trademark of SCIEX Pte. Ltd. SCIEX is being used under license.

Disclaimer

Comparative separations may not be representative of all applications.
For RESEARCH USE ONLY. Not for use in diagnostic procedures.
© 2016 Phenomenex, Inc. All rights reserved.