

APPLICATION

Enhanced Separation of Reb A, Stevioside and Stevia Active Components using Kinetex[®] 1.7 μ m C18 Core-Shell Column by HPLC/UV

Zeshan Aqueel and Allen Misa
Phenomenex, Inc., 411 Madrid Ave., Torrance, CA 90501 USA

Overview

Stevia is a common sugar substitute extracted from the leaves of the plant *Stevia rebaudiana*. Stevia has gained popularity in recent years as a natural alternative to sugar vs. various artificial sweeteners in the market. One of the most challenging separations required to fully evaluate the active components of Stevia is the resolution between Rebaudioside A (Reb A) and Stevioside. Presented below is an enhanced separation of Reb A and Stevioside and other active components of Stevia. With the high efficiency benefits of Kinetex Core-Shell Technology, retention and separation of the two closely eluting peaks are resolved.

LC/UV Conditions

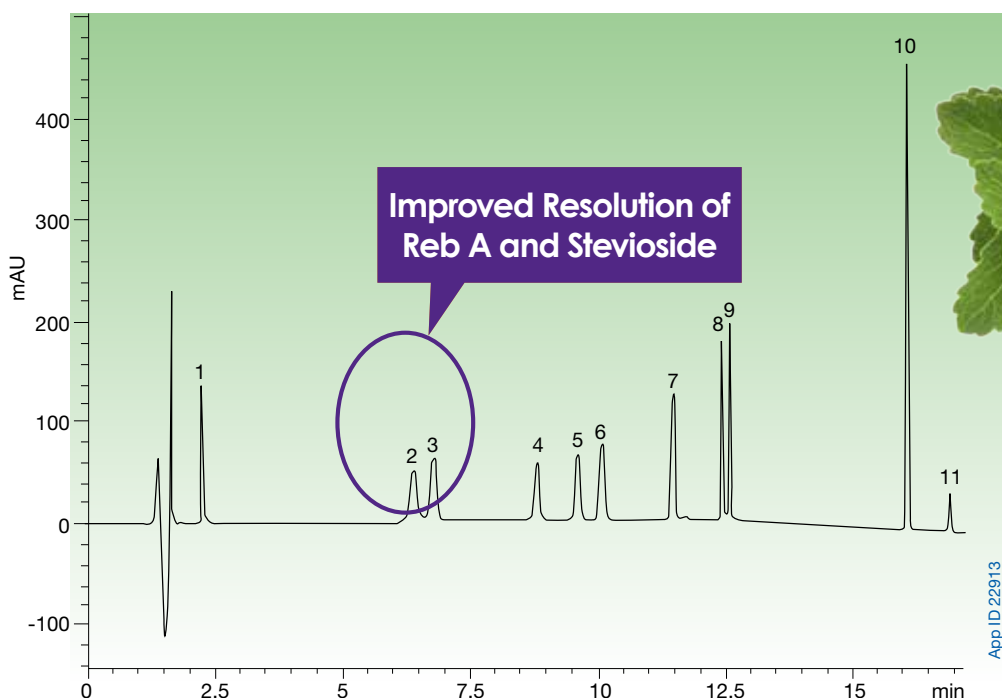
Column: Kinetex 1.7 μ m C18 100 Å
Dimensions: 150 x 2.1 mm
Part No.: 00F-4475-AN
Mobile Phase: A: 0.1 % Formic Acid in Water
 B: 0.1 % Formic Acid in Acetonitrile

Gradient	Time (min)	% B
	0	28
	2	28
	2.01	32
	5	32
	12	99
	16	99
	17	28
	25	28

Flow Rate: 0.2 mL/min
Temperature: Ambient
Detection: UV @ 202 nm

Sample: 1. Rebaudioside D
 2. Rebaudioside A
 3. Stevioside
 4. Rebaudioside F
 5. Rebaudioside C
 6. Dulcoside A
 7. Rubsode
 8. Rebaudioside B
 9. Steviobioside
 10. Steviol
 11. Isosteviol

Find more information on Kinetex core-shell HPLC and UHPLC columns at:
www.phenomenex.com/kinetex



APPLICATION

Kinetex[®] Ordering Information

5 µm Minibore Columns (mm)

Phases	30 x 2.1	50 x 2.1	100 x 2.1	150 x 2.1	3/pk
C18	00A-4601-AN	00B-4601-AN	00D-4601-AN	00F-4601-AN	AJO-8782 for 2.1 mm ID

SecurityGuard[™] ULTRA Cartridges[†]

5 µm MidBore[™] Columns (mm)

Phases	50 x 3.0	100 x 3.0	150 x 3.0	3/pk
C18	00B-4601-YO	00D-4601-YO	00F-4601-YO	AJO-8775 for 3.0 mm ID

SecurityGuard ULTRA Cartridges[†]

5 µm Analytical Columns (mm)

Phases	50 x 4.6	100 x 4.6	150 x 4.6	250 x 4.6	3/pk
C18	00B-4601-E0	00D-4601-E0	00F-4601-E0	00G-4601-E0	AJO-8768 for 4.6 mm ID

SecurityGuard ULTRA Cartridges[†]

5 µm Axia[™] Packed Preparative Columns (mm)

Phases	50 x 21.2	100 x 21.2	150 x 21.2	250 x 21.2	15 x 21.2
C18	00B-4601-PO-AX	00D-4601-PO-AX	00F-4601-PO-AX	00G-4601-PO-AX	AJO-9145 for 21.2 mm ID

SecurityGuard PREP Cartridges[†]

2.6 µm Minibore Columns (mm)

Phases	30 x 2.1	50 x 2.1	75 x 2.1	100 x 2.1	150 x 2.1	3/pk
C18	00A-4462-AN	00B-4462-AN	00C-4462-AN	00D-4462-AN	00F-4462-AN	AJO-8782 for 2.1 mm ID

SecurityGuard ULTRA Cartridges[†]

2.6 µm MidBore Columns (mm)

Phases	30 x 3.0	50 x 3.0	75 x 3.0	100 x 3.0	150 x 3.0	3/pk
C18	00A-4462-YO	00B-4462-YO	00C-4462-YO	00D-4462-YO	00F-4462-YO	AJO-8775 for 3.0 mm ID

SecurityGuard ULTRA Cartridges[†]

2.6 µm Analytical Columns (mm)

Phases	30 x 4.6	50 x 4.6	75 x 4.6	100 x 4.6	150 x 4.6	3/pk
C18	00A-4462-E0	00B-4462-E0	00C-4462-E0	00D-4462-E0	00F-4462-E0	AJO-8768 for 4.6 mm ID

SecurityGuard ULTRA Cartridges[†]

1.7 µm Minibore Columns (mm)

Phases	30 x 2.1	50 x 2.1	100 x 2.1	150 x 2.1	3/pk
C18	00A-4475-AN	00B-4475-AN	00D-4475-AN	00F-4475-AN	AJO-8782 for 2.1 mm ID

SecurityGuard ULTRA Cartridges[†]

1.7 µm MidBore Columns (mm)

Phases	50 x 3.0	100 x 3.0	3/pk
C18	00B-4475-YO	00D-4475-YO	AJO-8775 for 3.0 mm ID

SecurityGuard ULTRA Cartridges[†]

1.3 µm Minibore Columns (mm)

Phases	30 x 2.1	50 x 2.1
C18	00A-4515-AN	00B-4515-AN

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

* PREP SecurityGuard Cartridges require holder, Part No.: AJO-8223

** PREP SecurityGuard Cartridges require holder, Part No.: AJO-8277

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



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

Kinetex is a registered trademark, Axia, SecurityGuard, and MidBore are trademarks of Phenomenex.

Axia column and packing technology is patented by Phenomenex. U.S. Patent No. 7,674,383

© 2015 Phenomenex, Inc. All rights reserved.

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

Mexico
t: 001-800-844-5226
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