explore LUNA® OMEGA

Luna Omega C18

Application eBook

Your Go-To C18:

- Greater separation muscle
- Better peak shape through an inert foundation
- Extreme ruggedness and dependability

www.phenomenex.com/LunaOmega

phenomenex®

Luna Omega

Cutting Edge Fully Porous Silica Particle

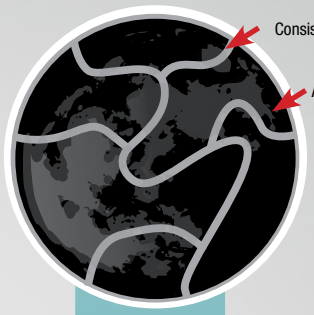
Luna® is one of the most recognized HPLC brands on the market, delivering high efficiency, ruggedness, reproducibility, and dependability for a wide range of analyses. The new Luna Omega builds upon this legacy with an innovative yet rugged silica particle architecture, designed and manufactured by Phenomenex based on more than 20 years of applied knowledge, invention, and customer experience.

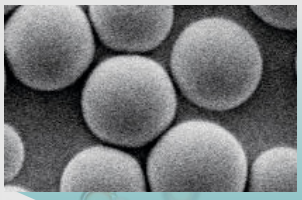
Novel Design and Manufacturing Process

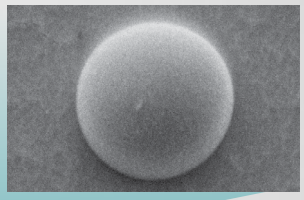
Within the novel manufacturing process of Luna Omega silica, we implement a proprietary processing technique to gain greater particle inertness, a stronger particle morphology, and more consistent porosity.

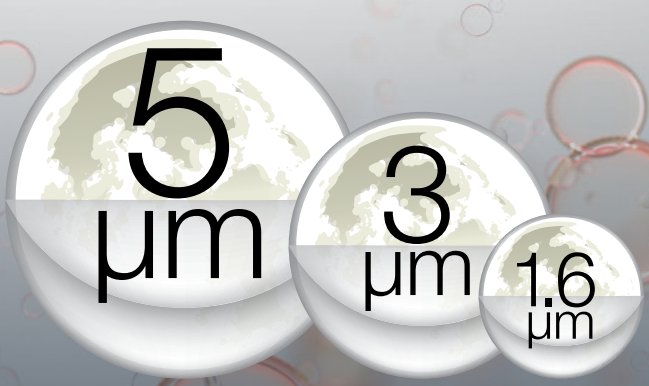
Thermal Modified Pore Structure

Most importantly, through our proprietary process, we eliminate micropores, further improving column efficiency, inertness, and reproducibility.









Enhanced with 20 Years of Technology, Innovation, and Experience

One of the world's leading HPLC brands, now enhanced for incredible LC performance! Luna Omega LC columns culminate 20 years of technological prowess, advancements, and innovation from Phenomenex!

With **astounding efficiency levels**, highly **versatile selectivities**, and **trusted accuracy**, Luna Omega columns will take your LC experience to a new level.

Ω

Luna® Omega UHPLC columns
will boost your LC instrumentation!

Table of Contents

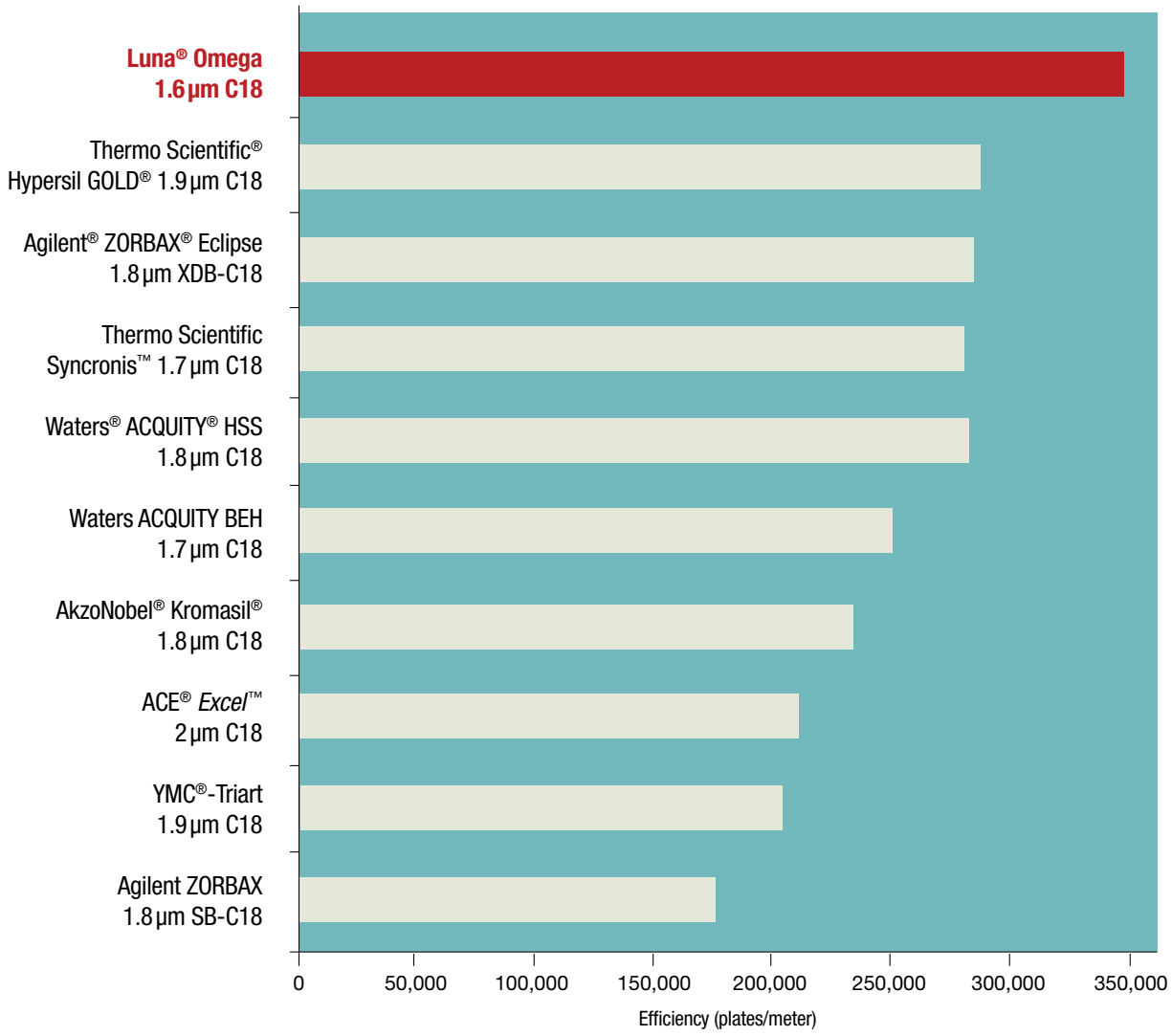
Omega

C18

Ω Astounding Performance

The undeniably high efficiency levels found in each Luna Omega UHPLC/HPLC column provides you with the potential of huge gains in method performance. While traditional silica and hybrid fully porous particles claim high performance, when compared to Luna Omega, they drastically fall short and prevent UHPLC scientists from reaching their UHPLC potential.

UHPLC Efficiency Comparison



Conditions for all columns:

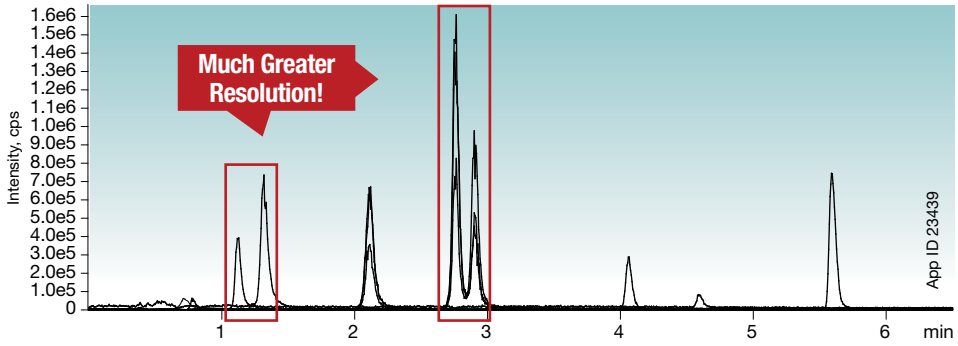
Dimension: 50 x 2.1 mm
Mobile Phase: Acetonitrile/Water (65:35)
Flow Rate: 0.5 mL/min
Temperature: Ambient
Detection: UV @ 254 nm
System: ACQUITY UPLC®
Sample: Naphthalene*

Comparative separations may not be representative of all applications.

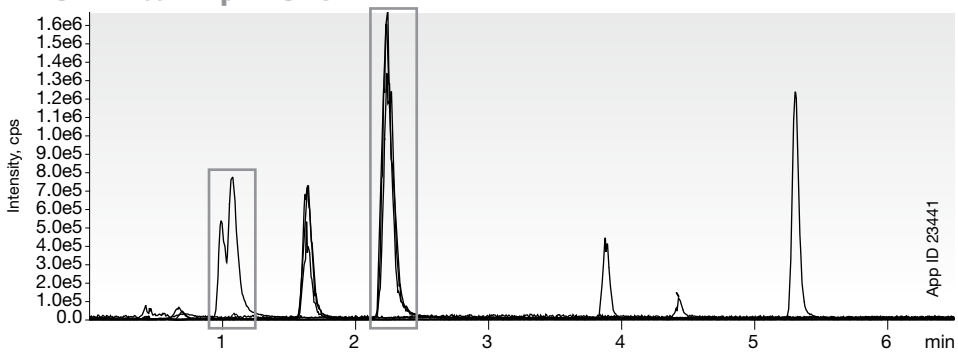
*Efficiency (plates/meter) comparison is based on peak performance associated with the compound naphthalene for all columns.

Our industry leading bonding technologies in conjunction with high efficiency levels ensure excellent stationary phase coverage and improved separation power. Now, with Luna Omega 1.6, 3, or 5 µm, you can turn difficult separations into resolution that is reliable and repeatable.

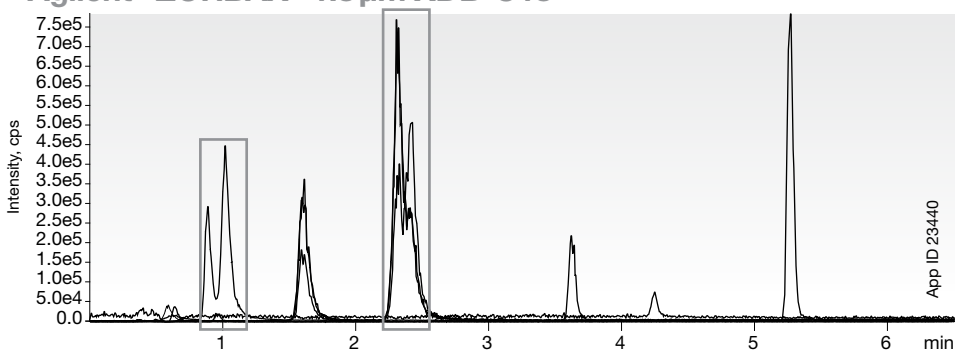
Luna® Omega 1.6µm C18



ACE® *Excel*™ 2µm C18-AR



Agilent® ZORBAX® 1.8µm XDB-C18



Conditions for all columns:

Columns: Luna Omega 1.6µm C18
ZORBAX 1.8µm XDB-C18
ACE *Excel* 2µm C18-AR

Dimension: 50 x 2.1 mm

Mobile Phase: A: 0.1 % Formic Acid in Water
B: 0.1 % Formic Acid in Methanol

Gradient:

Time (min)	% B
0	3
7	90

Flow Rate: 0.3 mL/min

Temperature: 30 °C

Detection: MS/MS

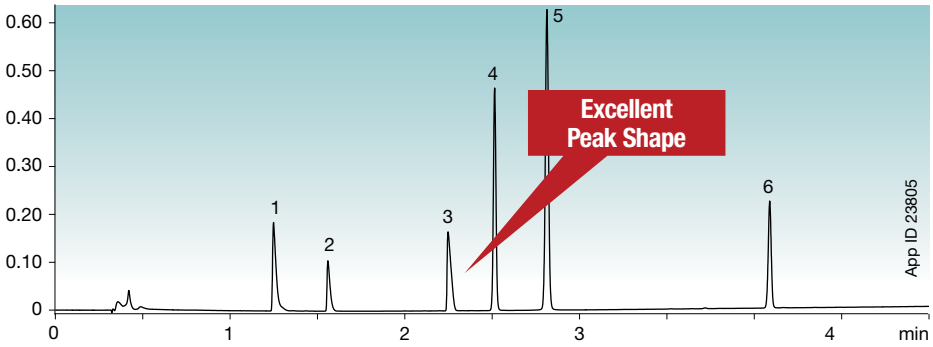
Sample:
1. Succinic acid
2. MMA
3. Glutaric acid
4. Methylsuccinate
5. Ethylmalonic acid
6. Hippuric acid
7. Homovanillic acid
8. Suberic acid

Comparative separations may not be representative of all applications.

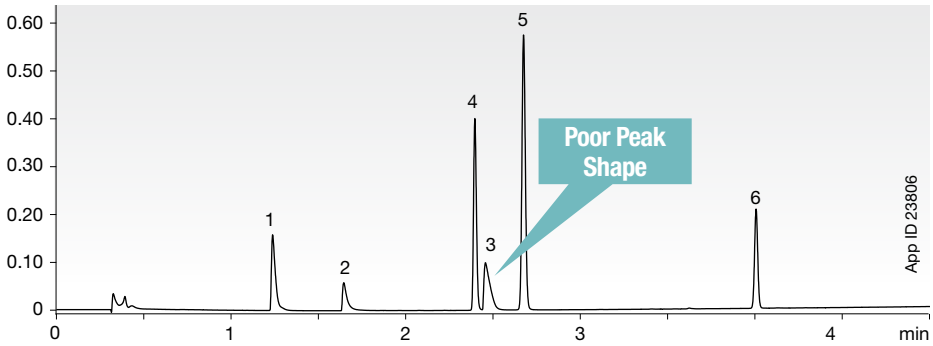
Ω Inert Foundation

Luna Omega HPLC and UHPLC columns contain a unique silica that is modified by using a proprietary, post-synthetic thermal treatment process to provide extraordinary mechanical strength and significantly greater inertness than traditional fully porous and hybrid materials. With this process, and our commitment to continuous improvement, the Luna Omega column is manufactured reproducibly from column-to-column, to batch-to-batch.

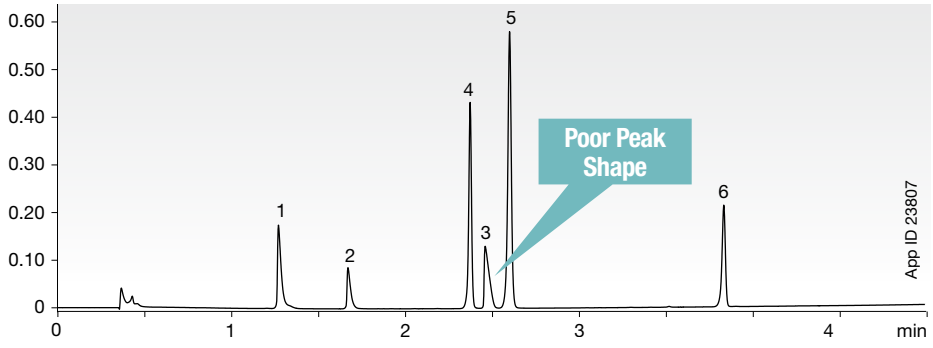
Luna® Omega 1.6 µm C18



Waters® ACQUITY® BEH 1.7 µm C18



Thermo Scientific® Hypersil GOLD® 1.9 µm C18



Conditions for all columns:

Columns: Luna Omega 1.6 µm C18
ACQUITY BEH 1.7 µm C18
Hypersil GOLD 1.9 µm C18

Dimension: 50 x 2.1 mm

Mobile Phase: A: 0.1 % Formic Acid in Water
B: 0.1 % Formic Acid in Acetonitrile

Gradient:

Time (min)	% B
0	5
5	95
6	95
6.1	5
8	5

Flow Rate: 0.4 mL/min

Temperature: Ambient

Detection: UV @ 254 nm

Sample:
1. Pindolol
2. Chlorpheniramine
3. Nortriptyline
4. 3-Methyl-4-nitrobenzoic acid
5. 5-Methyl salicylaldehyde
6. Hexanophenone

Comparative separations may not be representative of all applications.

Reproducible and Scalable Ω

By setting a new standard for reliability, the Luna® Omega C18 spans UHPLC and HPLC with a scalable range of high-performance particle sizes that will ensure that your developed methods are easily transferred. From single compound identification to complex impurity profiles, the Luna Omega C18 will serve as a pillar for your lab to count on day in and day out.

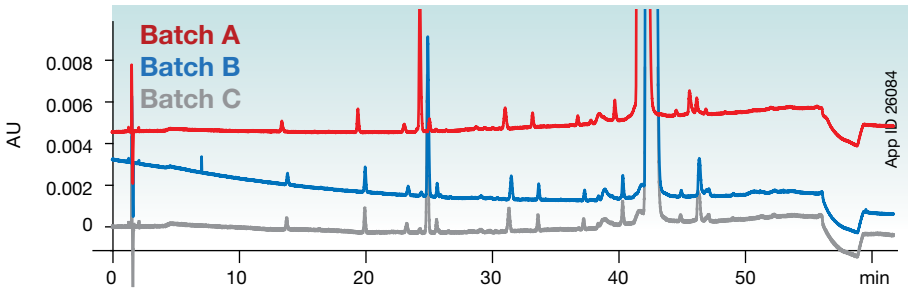
Batch-to-Batch Reproducibility Study

In this example, we compared three batches of Luna Omega C18 using all three different particle sizes on a complex QC Pharmaceutical representative sample.

Conditions for all columns:

Mobile Phase: A: Water with 0.1 % Formic Acid
B: Acetonitrile with 0.1 % Formic Acid
Temperature: 30 °C
Detection: UV @ 254 nm
Injection Volume: 5 µL
Sample: 5 mg/mL of Chlorhexidine and Related Substances

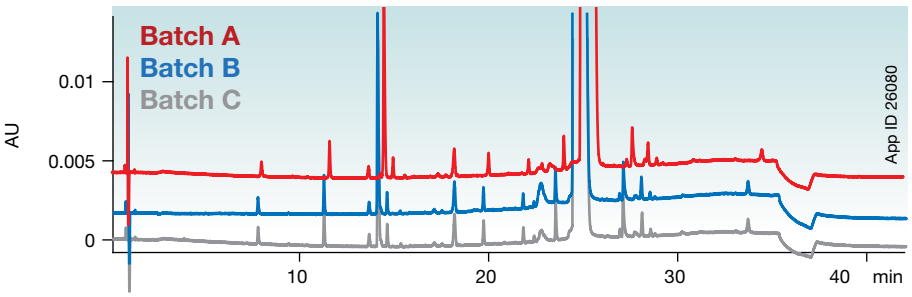
Luna Omega 5 µm C18
Impurity Profile 3 Batch Comparison



Column: Luna Omega 5 µm C18
Dimension: 250 x 4.6 mm
Part No.: 00G-4785-E0

Gradient: Time (min)	% B
0	2
2.5	2
52.5	35
55	35
57.5	2
62.5	2

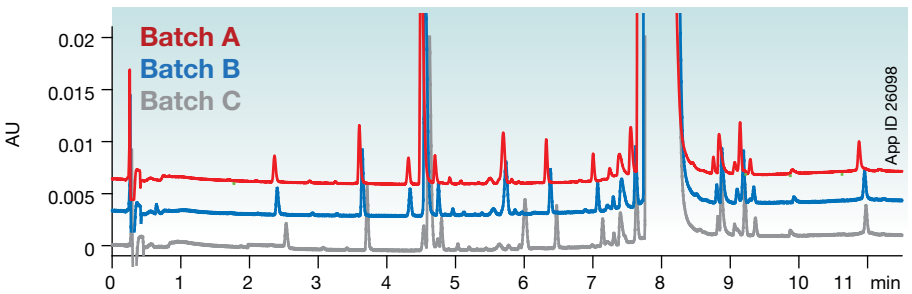
Luna Omega 3 µm C18
Impurity Profile 3 Batch Comparison



Column: Luna Omega 3 µm C18
Dimension: 150 x 4.6 mm
Part No.: 00F-4784-E0

Gradient: Time (min)	% B
0	2
1.5	2
31.5	35
34.5	35
36	2
42	2

Luna Omega 1.6 µm C18
Impurity Profile 3 Batch Comparison



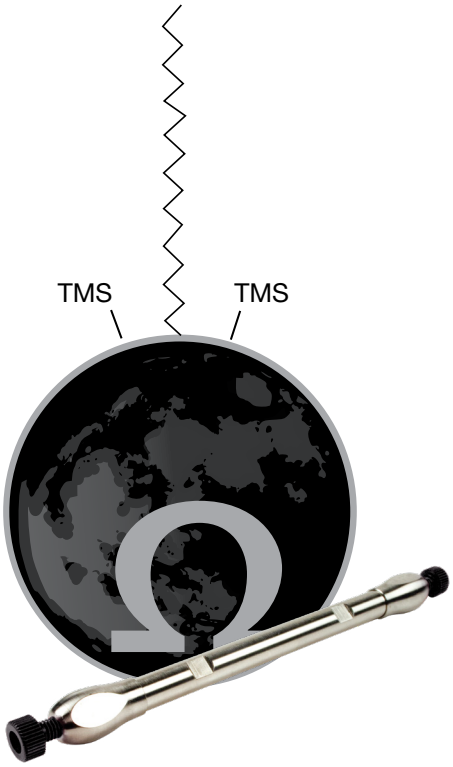
Column: Luna Omega 1.6 µm C18
Dimension: 50 x 2.1 mm
Part No.: 00B-4742-AN

Gradient: Time (min)	% B
0	2
0.5	2
10.5	35
11.5	35
12	2
14	2

Selectivity Highlight Luna Omega C18

Selectivity Highlight Luna Omega C18

Luna® Omega C18 is an excellent first choice for chromatographers who are just starting method development or attempting to improve upon existing chromatographic results with other C18s. With its higher performance potential, excellent retention profile, and greater inertness, the Luna Omega C18 was designed to be the new reproducible, all-purpose HPLC/UHPLC solution for all industries.



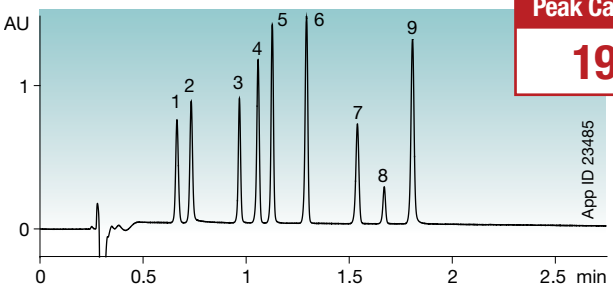
Phase	C18
Particle Size	1.6, 3, 5 µm
Pore Size	100 Å
pH Range	1.5 - 8.5*
Surface Area	260 m²/g
Carbon Load	11 %
Pressure Limit	1034/600 bar**
USP Listing	L1

*pH stability under gradient conditions. pH stability is 1.5-10 under isocratic conditions.
**1.6 µm Luna Omega columns are pressure stable up to 1,034 bar and 3 or 5 µm are stable up to 600 bar.

Greater Retention and Better Results

Higher efficiency levels in combination with excellent stationary phase coverage and greater particle inertness, translates to improved separation power for you. Now you can utilize the greater retention of Luna Omega C18 to tackle both easy and difficult separations.

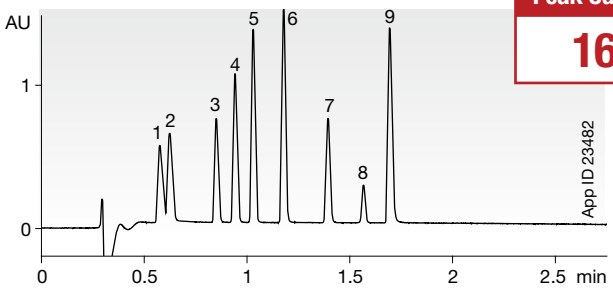
Luna Omega 1.6 µm C18



Peak Capacity
196

Greater Peak Capacity and Retention

Waters® ACQUITY® BEH 1.7 µm C18



Peak Capacity
160

Comparative separations may not be representative of all applications.

Conditions for all columns:

Columns: Luna Omega 1.6 µm C18
ACQUITY BEH 1.7 µm C18
Dimension: 50 x 2.1 mm
Mobile Phase: A: 0.1 % Formic Acid in Water
B: 0.1 % Formic Acid in Acetonitrile
Gradient:

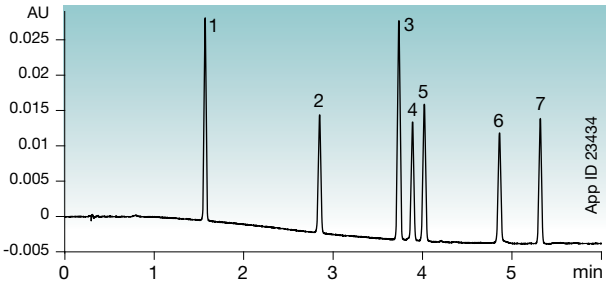
Time (min)	% B
0	10
3	55
3.5	55
3.51	10
5	10

Flow Rate: 0.4 mL/min
Temperature: Ambient
Detection: UV @ 205 nm
Sample: 1. Acetaminophen
2. 4-Aminobenzoic Acid
3. 4-Hydroxybenzoic Acid
4. 2-Acetaminophenol
5. 3-Hydroxybenzoic Acid
6. Salicylicamide
7. Phenol
8. Benzoic Acid
9. Salicylic Acid

Small and Large Compound Mixtures

Strong and focused hydrophobic retention, incredible efficiency and valuable inertness of Luna® Omega C18 columns make them an excellent choice for small mixtures of compounds differing in hydrophobicity as well as large mixtures of compounds like impurity/degradation profiles and peptide maps.

Phenols



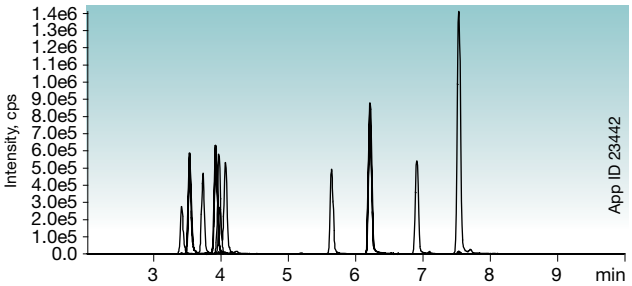
Columns: Luna Omega 1.6 µm C18
Dimension: 50 x 2.1 mm
Part No.: 00B-4742-AN
Mobile Phase: A: 0.1 % Formic Acid in Water
B: 0.1 % Formic Acid in Acetonitrile

Gradient:

Time (min)	% B
0	5
6	50
7	50
7.1	5
9	5

Flow Rate: 0.4 mL/min
Temperature: 22 °C
Detection: UV @ 270 nm
Sample:
1. 3-Hydroxyphenol
2. Phenol
3. 4-Nitrophenol
4. 4-Methylphenol
5. 2-Methylphenol
6. 2,4-Dimethylphenol
7. 1-Naphthol

Synthetic Cannabinoids



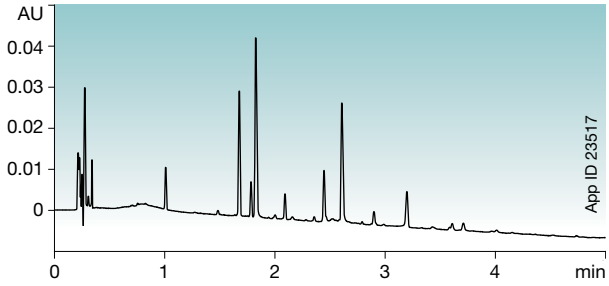
Columns: Luna Omega 1.6 µm C18
Dimension: 50 x 2.1 mm
Part No.: 00B-4742-AN
Mobile Phase: A: 0.1 % Formic Acid in Water
B: 0.1 % Formic Acid in Acetonitrile

Gradient:

Time (min)	% B
0	50
6	100

Flow Rate: 0.3 mL/min
Temperature: 30 °C
Detection: MS/MS (SCIEX® API 4000™)
Sample:
1. JWH-073 Butanoic acid metabolite
2. JWH-073 3-hydroxybutyl metabolite
3. JWH-018 Pentanoic acid metabolite
4. JWH-073 4-hydroxybutyl metabolite
5. JWH-018 4-hydroxypentyl metabolite
6. AM-2201 4-hydroxypentyl metabolite
7. JWH-018 5-hydroxypentyl metabolite
8. AM-694
9. AM-2201
10. JWH-073
11. JWH-018

OTC Drug - Pill Formulation Profile



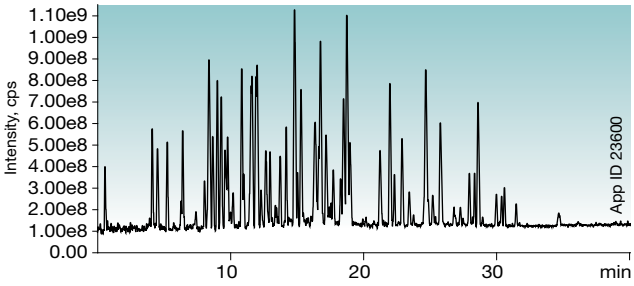
Columns: Luna Omega 1.6 µm C18
Dimension: 50 x 2.1 mm
Part No.: 00B-4742-AN
Mobile Phase: A: 20 mM Potassium Phosphate pH 7.2
B: Acetonitrile

Gradient:

Time (min)	% B
0	5
5	70
6	70
6.1	5
8	5

Flow Rate: 0.4 mL/min
Temperature: Ambient
Detection: UV @ 254 nm
Sample: OTC Drug Pill

Peptide Map – Digested BSA



Columns: Luna Omega 1.6 µm C18
Dimension: 100 x 2.1 mm
Part No.: 00D-4742-AN
Mobile Phase: A: 0.1 % Formic Acid in Water
B: 0.1 % Formic Acid in Acetonitrile

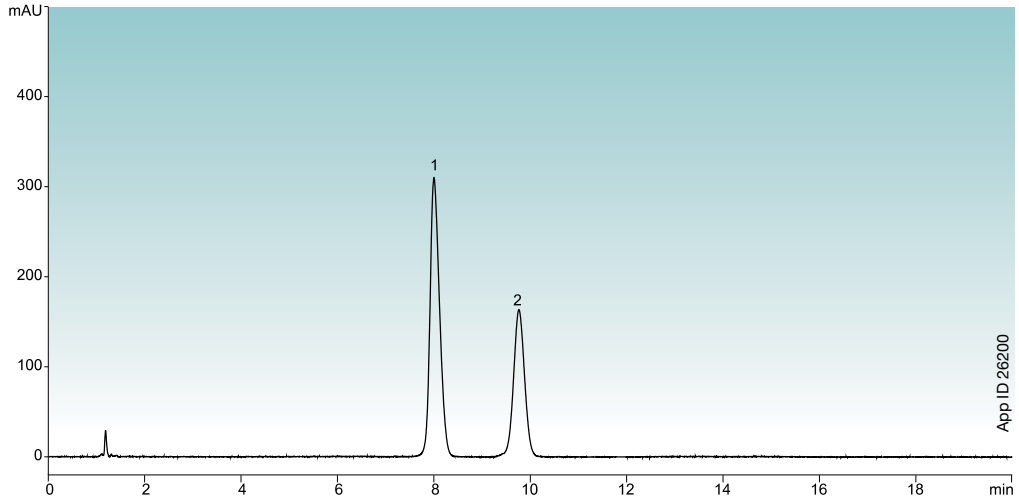
Gradient:

Time (min)	% B
0	3
50	50
50.1	3

Flow Rate: 0.4 mL/min
Temperature: 40 °C
Detection: MS/MS (SCIEX API 4000)
Sample: Tryptic digest of BSA

Comparative separations may not be representative of all applications.

Sildenafil Citrate RS and Sildenafil N-Oxide USP System Suitability Solution on Luna® Omega 5 µm C18

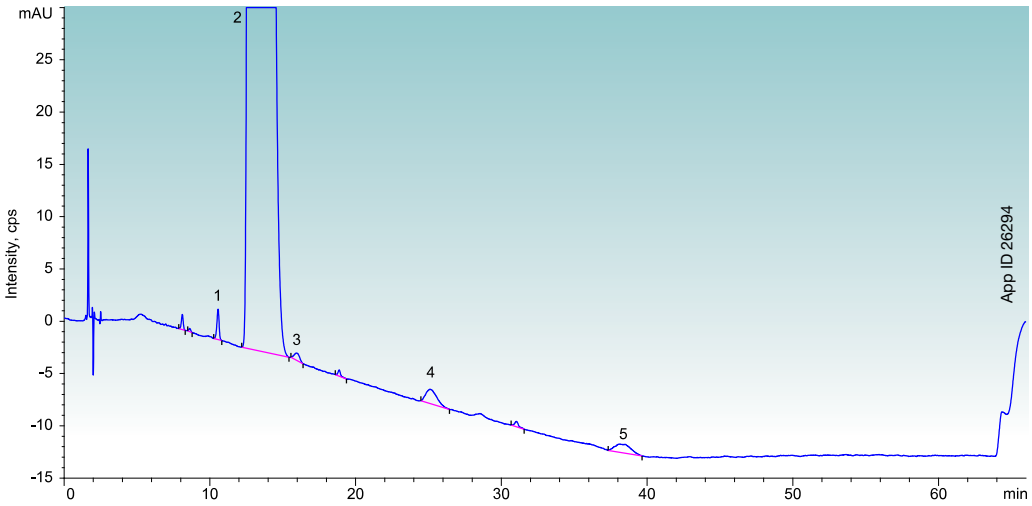


Columns: Luna Omega 5 µm C18
Dimension: 150 x 4.6 mm
Part No.: 00F-4785-E0
Elution Type: Isocratic
Find the full elution online at www.phenomenex.com/Application/Detail/26200

Gradient:	Time (min)	% B
	20	0

Flow Rate: 1.4 mL/min
Temperature: 30 °C
Detection: UV @ 290 nm
Sample: 1. Sildenafil citrate
2. Sildenafil N-Oxide

Lisinopril Ph. Eur Reference Solution A+B+C+D on Luna Omega 5 µm C18



Columns: Luna Omega 5 µm C18
Dimension: 250 x 4.6 mm
Part No.: 00G-4785-E0
Elution Type: Gradient
Find the full elution online at www.phenomenex.com/Application/Detail/26294

Gradient:	Time (min)	% B
	0	0
	2	0
	37	100
	62	100
	62.5	0
	66	0

Flow Rate: 1.4 mL/min
Temperature: 30 °C
Detection: UV @ 290 nm
Sample: 1. Impurity A
2. Lisinopril
3. Impurity E
4. Impurity F
5. Impurity G

Ph. Eur. Monograph 401: Levothyroxine Sodium

The suitability of this Luna Omega reversed phase HPLC column for the analysis of related substances according to Ph. Eur. monograph 401 and effect of adapting the flow rate according to the allowable adjustments of chapter 2.246 of the European Pharmacopoeia is shown here. System suitability requires a resolution of greater than 5 for the separation of impurity A and Levothyroxine.

Figure 2a: Reference a on Luna® Omega 3 µm C18 with flow rate 1.0 mL/min

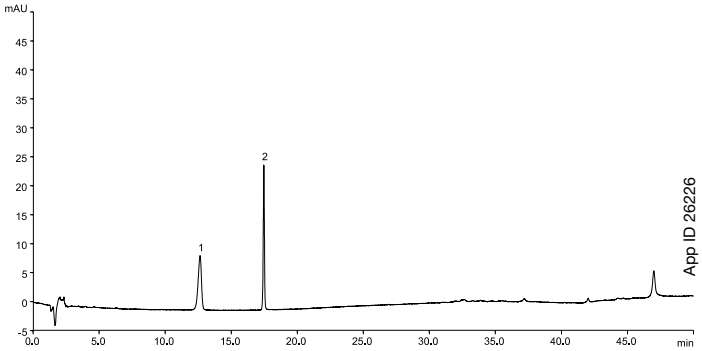


Figure 2b: Reference d on Luna Omega 3 µm C18 with flow rate 1.0 mL/min

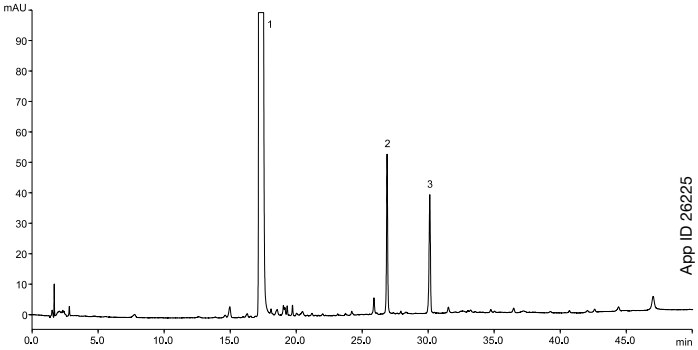


Figure 3a: Reference a on Luna Omega 3 µm C18 with flow rate 1.32 mL/min

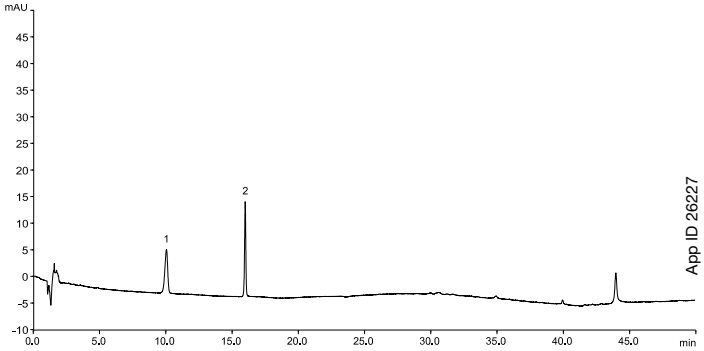
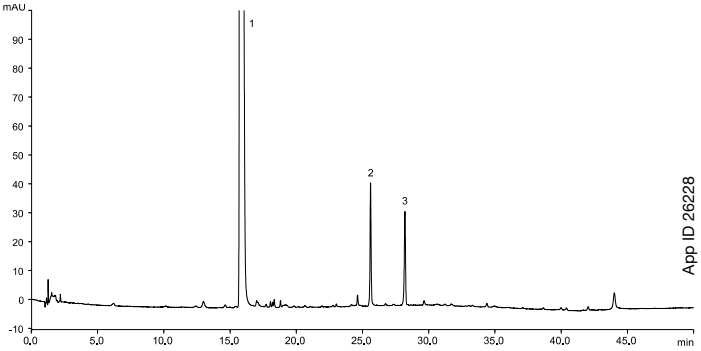


Figure 3b: Reference d on Luna Omega 3 µm C18 with flow rate 1.32 mL/min



HPLC Conditions

Columns: Luna Omega 3 µm C18
Dimension: 150 x 4.6 mm
Part No.: 00F-4874-E0
Elution Type: A: 1.97 g phosphoric acid in 2 L water
B: 1.97 g phosphoric acid in 2 L acetonitrile

Gradient:

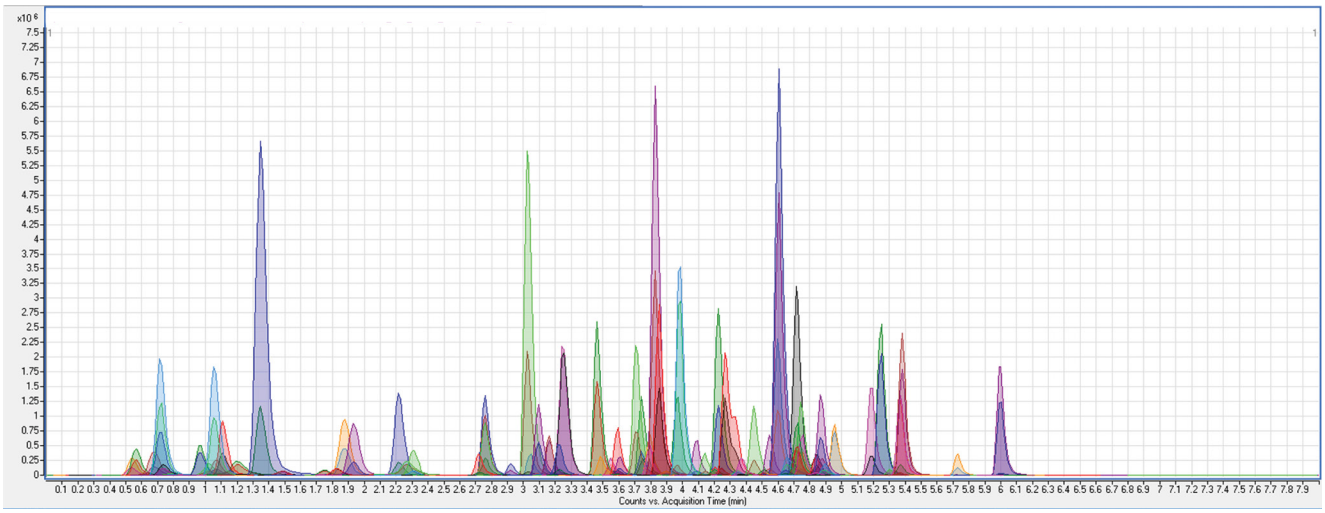
Time (min)	% B
0	30
10	30
40	80
50	80

Flow Rate: as indicated on the chromatograms
Temperature: 25 °C
Injection:: 25 µL
System: Shimadzu® Nexera® XR
Detector: UV @ 225 nm

See the full application note online at
www.phenomenex.com/TN77471120

Rapid Analysis of 125 Pesticides from Groundwater by UHPLC-MS/MS

With this application, 125 pesticides and degradants can be quantified at approximately 10 ng/L in groundwater using UHPLC-MS/MS with a Luna® Omega 1.6 µm C18 column. The high resolution afforded by the Luna Omega C18 gives great separation, allowing the mass spectrometer to maximize dwell time and achieve very low detection limits in a short run of 8 minutes.



App ID 23803

Column: Luna Omega 1.6 µm C18
Dimensions: 50 x 2.1 mm
Part No.: 00B-4742-AN
Mobile Phase: A: 2.5 mM Ammonium acetate + 0.05% Acetic acid in water
B: 0.05% Acetic acid in acetonitrile

Gradient:

Time (min)	% B
0	15
0.5	15
2.5	40
5.75	75
6.25	100
7	100
7.1	15
8	15

Injection: 75 µL- Direct Inject
Flow Rate: 0.55 mL/min
Temperature: 45 °C
Detection: Agilent® 6495 Triple Quadrupole LC-MS
Sample: 125 Pesticides and Degradants (see link below)

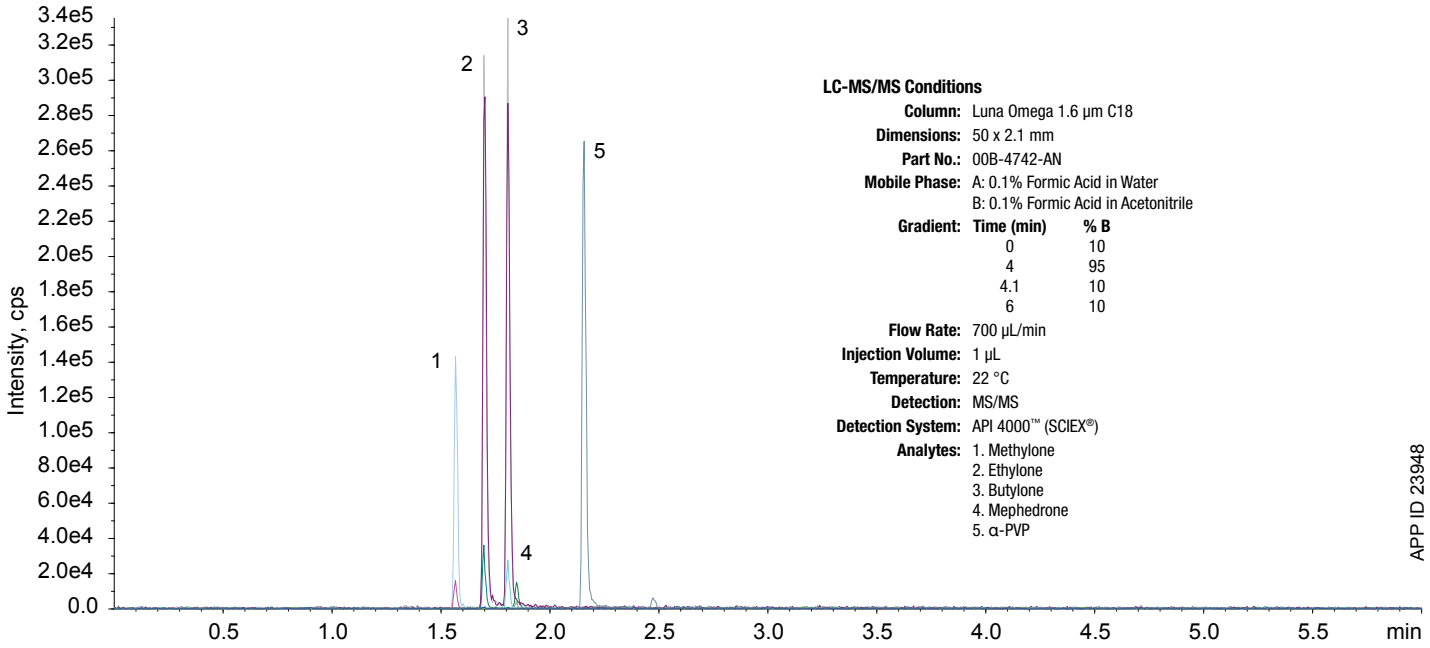
See the full application note online at

www.phenomenex.com/TN45280816

Analysis of Synthetic Cathinones (Bath Salts) from Urine and Whole Blood by LC-MS/MS

This application illustrates the separation of 5 common synthetic cathinones using a Luna® Omega 1.6 µm C18 UHPLC column. Luna Omega columns contain a unique silica which is modified using a proprietary, post-synthetic thermal treatment process to provide extraordinary mechanical strength and significantly greater inertness than traditional fully porous and hybrid materials. This greatly minimizes any secondary interactions that negatively affect peak shape, allowing for greater method accuracy.

Extracted Ion Chromatagram of Bath Salts in Whole Blood



LC-MS/MS Conditions

Column: Luna Omega 1.6 µm C18
Dimensions: 50 x 2.1 mm
Part No.: 00B-4742-AN
Mobile Phase: A: 0.1% Formic Acid in Water
B: 0.1% Formic Acid in Acetonitrile

Gradient:	**Time (min)**	**% B**
	0	10
	4	95
	4.1	10
	6	10

Flow Rate: 700 µL/min
Injection Volume: 1 µL
Temperature: 22 °C
Detection: MS/MS
Detection System: API 4000™ (SCIEX®)
Analytes: 1. Methylone
2. Ethylone
3. Butylone
4. Mephedrone
5. α-PVP

APP ID 23948

Sample Preparation

Solid Phase Extraction (SPE)

Cartridge:	Strata®-X-Drug B
Part No:	8B-S128-UCH
Condition:	1 mL each of methanol, DI water, and 100 mm sodium acetate
Load:	Load pretreated sample
Weak Wash:	2 mL of 100 mM sodium acetate (pH 5.0)
Strong Wash:	1 mL of methanol
Dry Down:	2 minutes at >10" hg
Elute:	3 mL of ethyl acetate: IPA: ammonium hydroxide (70:20:10)
Evaporate:	to 500 µL and add 100 µL of HCl:methanol (20:80), evaporate to dryness under nitrogen
Reconstitute:	100 µL of methanol

Q1	Q2	Analyte	Retention Time (min)
208.1	160.2	Methylone	1.56
222.3	174.1	Ethylone	1.69
222.3	174.1	Butylone	1.80
178.1	160.2	Mephedrone	1.84
232.4	91	α-PVP	2.15

Pretreatment

Urine	Add 2 mL of 100 mM sodium acetate buffer (pH 5.0) and 50 µL of internal standards (@10 ppm) to 2 mL of urine
Whole blood	1. Add 2 mL of ice cold methanol:acetonitrile (50:50) and 20 µL of internal standards (@10 ppm) and 2 mL of 100 mm sodium acetate to 1 mL of blood. 2. Centrifuge at 4700 rpm 10 °C for 5 min 3. Transfer supernatant for SPE

See the full application note online at
www.phenomenex.com/TN48401216

Application Highlights Overview

Why chose Luna Omega columns?

- Greater separation muscle
- Better peak shape through an inert foundation
- Extreme ruggedness and dependability

Application Highlights

Environmental

Forensic/Toxicology

Pharmaceuticals

- **Batch-to-Batch Comparison: Steroid Mixture on Luna Omega 3 µm C18**
- **Scalability, Reproducibility, and Increased Separation Power of Luna Omega C18**
- **Ph. Eur. Monograph 401: Levothyroxine Sodium on Luna C18(2) and Luna Omega C18**
- **Rapid Analysis of 125 Pesticides from Groundwater by UHPLC-MS/MS using Luna Omega C18**
- **Analysis of Synthetic Cathinones (Bath Salts) from Urine and Whole Blood by LC-MS/MS using Luna Omega C18**
- **Luna Omega C18 Column-to-Column and Batch-to-Batch Reproducibility from HPLC to UHPLC**
- **Demonstrating the Luna Omega C18's Reproducibility, Scalability – HPLC to UHPLC – 1.6 µm, 3 µm, and 5 µm**
- **Comparison of Two High-Performance Particle Morphologies in the Separation of Hydrochlorothiazide and Chlorothiazide**

Column Characteristics

Luna Omega Phases	Description	Particle Sizes (µm)	Pore Size (Å)	Surface Area (m^2/g)	Carbon Load (%)	pH Stability	Reversed Phase	HILIC
C18	C18 ligand optimized for improved peak shape	1.6, 3, 5	100	260	11	1.5 - 8.5*	☾	
Polar C18	Enhanced selectivity/retention for polar analytes without diminishing useful non-polar retention	1.6, 3, 5	100	260	9	1.5 - 8.5*	☾	
PS C18	Mixed-mode functionality offering enhanced retention of polar acids along with improved peak shape for strong bases	1.6, 3, 5	100	260	9	1.5 - 8.5*	☾	☾
Sugar	Combined amide/amino stationary phase and polar endcapping offers enhanced HILIC retention of sugars through multiple interaction mechanisms.	3	100	260	<2	2.0-7.0	☾	

* pH stability under gradient conditions. pH stability is 1.5 - 10 under isocratic conditions.

Ordering Information

explore LUNA® OMEGA

1.6 µm Microbore Columns (mm)			
Phases	50 x 1.0	100 x 1.0	150 x 1.0
Polar C18	00B-4748-A0	00D-4748-A0	00F-4748-A0
PS C18	—	00D-4752-A0	—
C18	00B-4742-A0	00D-4742-A0	00F-4742-A0

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
Polar C18	00A-4748-AN	00B-4748-AN	00D-4748-AN	00F-4748-AN	AJ0-9505
PS C18	00A-4752-AN	00B-4752-AN	00D-4752-AN	00F-4752-AN	AJ0-9508
C18	00A-4742-AN	00B-4742-AN	00D-4742-AN	00F-4742-AN	AJ0-9502
					for 2.1 mm ID

3 µm Micro LC Columns (mm)							Trap Column
Phases	50 x 0.30	100 x 0.30	150 x 0.30	50 x 0.50	100 x 0.50	150 x 0.50	20 x 0.30
Polar C18	00B-4760-AC	00D-4760-AC	00F-4760-AC	00B-4760-AF	00D-4760-AF	00F-4760-AF	—
PS C18	00B-4758-AC	00D-4758-AC	00F-4758-AC	00B-4758-AF	00D-4758-AF	00F-4758-AF	05M-4758-AC

3 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* /10 pk
Polar C18	00A-4760-AN	00B-4760-AN	00D-4760-AN	00F-4760-AN	AJ0-7600
PS C18	00A-4758-AN	00B-4758-AN	00D-4758-AN	00F-4758-AN	AJ0-7605
C18	—	00B-4784-AN	00D-4784-AN	00F-4784-AN	AJ0-7611
SUGAR	—	00B-4775-AN	00D-4775-AN	00F-4775-AN	AJ0-4496
					for ID: 2.0-3.0 mm

3 µm MidBore™ Columns (mm)				SecurityGuard Cartridges (mm)
Phases	50 x 3.0	100 x 3.0	150 x 3.0	4 x 2.0* /10 pk
Polar C18	00B-4760-Y0	00D-4760-Y0	00F-4760-Y0	AJ0-7600
PS C18	00B-4758-Y0	00D-4758-Y0	00F-4758-Y0	AJ0-7605
C18	00B-4784-Y0	00D-4784-Y0	00F-4784-Y0	AJ0-7611
SUGAR	—	—	00F-4775-Y0	AJ0-4496
				for ID: 2.0-3.0 mm

3 µm Analytical Columns (mm)					SecurityGuard Cartridges (mm)
Phases	50 x 4.6	100 x 4.6	150 x 4.6	250 x 4.6	4 x 3.0* /10 pk
Polar C18	00B-4760-E0	00D-4760-E0	00F-4760-E0	00G-4760-E0	AJ0-7601
PS C18	00B-4758-E0	00D-4758-E0	00F-4758-E0	00G-4758-E0	AJ0-7606
C18	00B-4784-E0	00D-4784-E0	00F-4784-E0	00G-4784-E0	AJ0-7612
SUGAR	—	00D-4775-E0	00F-4775-E0	00G-4775-E0	AJ0-4495
					for ID: 3.2-8.0 mm

5 µm Minibore and MidBore™ Columns (mm)							SecurityGuard Cartridges (mm)
Phases	50 x 2.1	100 x 2.1	150 x 2.1	50 x 3.0	100 x 3.0	150 x 3.0	4 x 2.0* /10 pk
Polar C18	00B-4754-AN	00D-4754-AN	00F-4754-AN	00B-4754-Y0	00D-4754-Y0	00F-4754-Y0	AJ0-7600
PS C18	00B-4753-AN	00D-4753-AN	00F-4753-AN	00B-4753-Y0	00D-4753-Y0	00F-4753-Y0	AJ0-7605
							for ID: 2.0 - 3.0 mm

5 µm Analytical Columns (mm)					SecurityGuard Cartridges (mm)
Phases	50 x 4.6	100 x 4.6	150 x 4.6	250 x 4.6	4 x 3.0* /10 pk
Polar C18	00B-4754-E0	00D-4754-E0	00F-4754-E0	00G-4754-E0	AJ0-7601
PS C18	00B-4753-E0	00D-4753-E0	00F-4753-E0	00G-4753-E0	AJ0-7606
C18	00B-4785-E0	00D-4785-E0	00F-4785-E0	00G-4785-E0	AJ0-7612
					for ID: 3.2-8.0 mm

5 µm Semi-Preparative Columns (mm)		SecurityGuard Cartridges (mm)
Phases	250 x 10	10 x 10** /3 pk
Polar C18	00G-4754-N0	AJ0-9519
PS C18	00G-4753-N0	AJ0-9520
		for ID: 9-16 mm

5 µm Axia™ Packed Preparative Columns (mm)					SecurityGuard Cartridges (mm)
Phases	50 x 21.2	100 x 21.2	150 x 21.2	250 x 21.2	15 x 21.2** /ea
Polar C18	00B-4754-P0-AX	00D-4754-P0-AX	00F-4754-P0-AX	00G-4754-P0-AX	AJ0-7603
PS C18	00B-4753-P0-AX	00D-4753-P0-AX	00F-4753-P0-AX	00G-4753-P0-AX	AJ0-7608
C18	—	—	—	00G-4785-P0-AX	—
					for ID: 18-29 mm

5 µm Axia™ Packed Preparative Columns (mm) (cont'd)					SecurityGuard Cartridges (mm)
Phases	100 x 30	150 x 30	250 x 30	250 x 50	15 x 30.0♦ /ea
Polar C18	00D-4754-U0-AX	00F-4754-U0-AX	00G-4754-U0-AX	00G-4754-V0-AX	AJ0-7604
PS C18	00D-4753-U0-AX	00F-4753-U0-AX	00G-4753-U0-AX	00G-4753-V0-AX	AJ0-7609
					for ID: 30-49 mm

‡ SecurityGuard ULTRA Cartridges require holder, Part No.: AJ0-9000
* SecurityGuard Analytical Cartridges require holder, Part No.: KJ0-4282
** SemiPREP SecurityGuard Cartridges require holder, Part No.: AJ0-9281
** PREP SecurityGuard Cartridges require holder, Part No.: AJ0-8223
♦ PREP SecurityGuard Cartridges require holder, Part No.: AJ0-8277

Luna Omega C18

Application eBook

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