LUNA®

ONE OF THE WORLD'S LEADING HPLC COLUMNS

If Luna does not provide at least an equivalent separation as compared to a competing column of the same particle size, similar phase and dimensions, send in your comparative data within 45 days and keep the Luna column for FREE

Develop or Improve your HPLC Method

- **Wide pH stability from 1.5 to 10***
- **Exceptionally rugged USP Phases: Silica, C5, C8, C18, Phenyl-Hexyl, CN, NH_2, SCX**
- **Easy method scalability with 3, 5, 10, 10-*PREP* and 15µ medias**
- **Extensive batch traceability and reproducibility data supplied with every column**

Material Characteristics

Packing Material	Particle Shape/Size (µ)	Pore Size (Å)	Surface Area (m^2/g)	Carbon Load %	Calculated Bonded Phase Coverage (µmole/m^2)
Luna Silica(2)	Spher. 3, 5,10,15	100	400	0	–
Luna C5	Spher. 5,10	100	440	12.5	7.85
Luna C8	Spher. 5,10	100	440	14.75	5.50
Luna C8(2)	Spher. 3, 5,10,15	100	400	13.5	5.50
Luna C18	Spher. 5,10	100	440	19	3.00
Luna C18(2)	Spher. 3, 5,10,15	100	400	17.5	3.00
Luna Phenyl-Hexyl	Spher. 3, 5,10, 15	100	400	17.5	4.00
Luna CN*	Spher. 3, 5, 10	100	400	7.0	3.80
Luna NH_2*	Spher. 3, 5, 10	100	400	9.5	5.80
Luna SCX*	Spher. 5,10	100	400	0.15 meq/g	

USP Phases for Virtually Every Application

Luna Bonded Phase Selectivity Chart

	Description	Application
C5	5, 10µ A reversed-phase chemistry that offers greater hydrolytic stability and alternative selectivity over the classic C4 phase.	Highly hydrophobic compounds. Good alternative to C8 or C18 when less retention is desired.
C8(2)	3, 5, 10, 10-*PREP*, 15µ C8 phase for excellent efficiency, peak shape and resolution. Significantly improved performance over traditional C8 phases due to high surface coverage. Slightly lower carbon load than original Luna C8.	Great starting point for methods development of pharmaceuticals, nucleotides and polar compounds. Excellent for highly aqueous and LC/MS applications.
C8	5, 10µ Original Luna C8 phase. Highly retentive C8 optimized for long lifetimes at extremely high pH levels.	A "workhorse" for extremely high pH applications, or when a more retentive C8 is desired.
C18(2)	3, 5, 10, 10-*PREP*,15µ C18 phase. Excellent efficiency, peak shape and resolution. Slightly lower carbon load than original Luna C18.	A C18 phase for virtually all HPLC applications. Range of particle sizes offers amazing versatility for capillary and LC/MS, to prep and process scale applications. Our No.1 recommended choice for HPLC method development.
C18	5, 10µ Original Luna C18 phase. Very high retention, optimized for long lifetimes at extremely high pH levels.	A "workhorse" for extremely high pH applications, or when longer retention is desired.
Phenyl-Hexyl	3, 5, 10, 10-*PREP*,15µ A (patented) phenyl phase which employs a hexyl alkyl linker as opposed to the traditional propyl chain. Offers great stability as well as alternative selectivity.	Remarkable selectivity for aromatic compounds. Offers selectivity advantages of both a phenyl phase and a C6 or C8 alkyl phase. Stable, reproducible alternative to traditional phenyl phases. Also very good for amine and polar compound selectivity.
CN	3, 5, 10µ Cyano phase. Can be used as reversed- or normal-phase material. The use of Luna base silica results in overall phase reproducibility and performance.	Excellent for improving the retention of polar compounds. Extremely rapid equilibration makes it very good for rapid screening and gradient applications. Exceptional normal phase performance.
NH_2	3, 5, 10µ Amino Phase. Can be used in reversed or normal phase modes. Stable from pH 1.5 to 11.0 and under 100% aqueous conditions. High performance silica and bonding techniques produces a rugged, highly reproducible column.	Excellent for sugar analysis or anionic compounds by reversed phase chromatography and for compounds capable of hydrogen bonding under normal phase conditions.
SCX	5, 10µ A Benzene Sulfonic Acid bonded phase is used to make this Strong Cation Exchange (SCX) column. Offers great peak shape and resolution.	Excellent for cationic and nitrogen containing analytes such as cough and cold compounds, codeine and morphine alkaloids, and drugs of abuse. Also useful for 2-dimension chromatography (SCX-RP-MS-MS) of small peptides and protein digests.

**Luna CN is stable from pH 1.5 to 7.0, Luna Amino (NH_2) is stable from pH 1.5 to 11.0, Luna SCX is stable from pH 2.0 to 7.0.*

LUNA SILICA

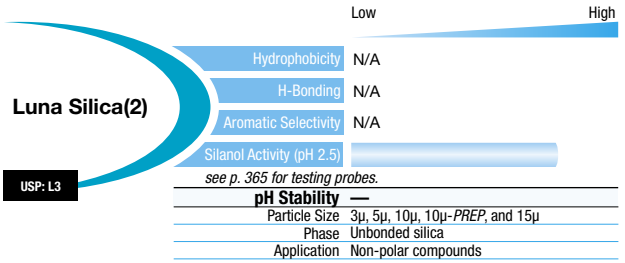
A Backbone & Phase Designed for Long Column Lifetimes

Luna's excellent silica is not simply the result of ultra-pure metal-free silica (99.999% purity). Meticulous care is given to the quality control of surface smoothness, pore structure and pore consistency to ensure particles of uniform structure and enhanced mechanical strength. Either bonded or unbonded, Luna silica produces highly advanced HPLC columns:

- **Low percentage of "fines" from damaged silica particles stabilizing the column bed and leading to lower backpressures and enhanced column performance and lifetimes**
- **High column bed stability enhanced by particle shape uniformity**

Incredible Silica Smoothness

Luna silica is extremely smooth and spherical. For bonded phases, this provides a uniform bonding surface for consistent and even bonded phase coverage. The likelihood of silica particle shearing and breakage during bonding and packing is very low; thus, Luna columns have high efficiencies and long column lifetimes.



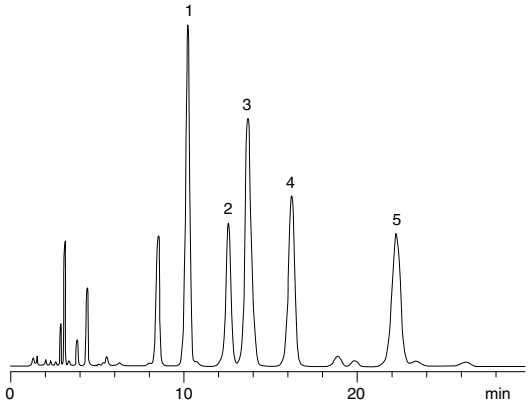
see p. 365 for testing probes.

pH Stability	—
Particle Size	3µ, 5µ, 10µ, 10µ-*PREP*, and 15µ
Phase	Unbonded silica
Application	Non-polar compounds

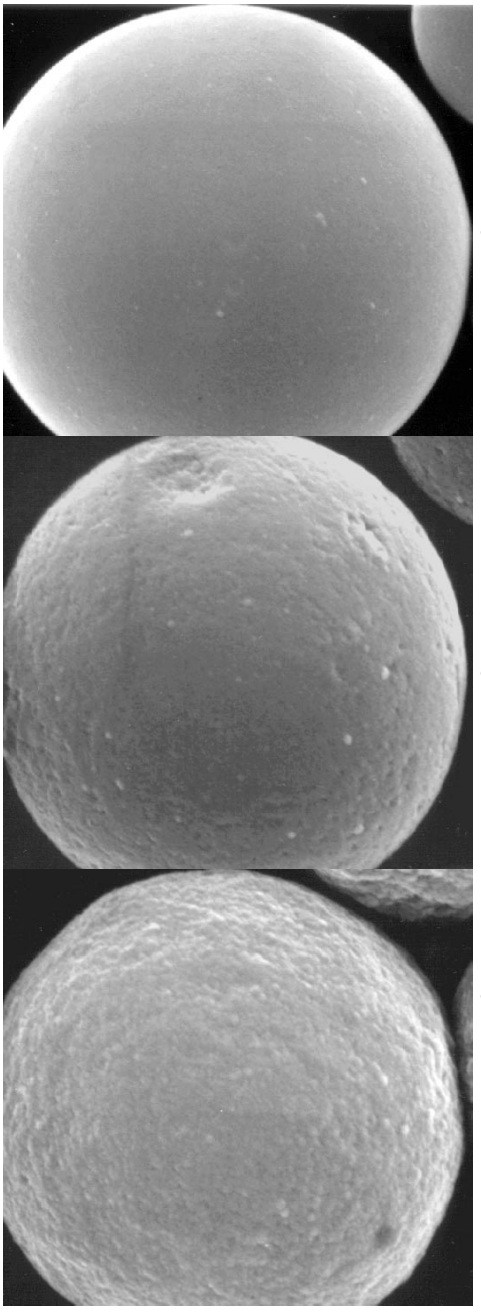
App ID 11138

Natural Products

Column:	Luna 5µ Silica(2)
Dimensions:	150 x 4.6mm
Order No:	00F-4274-E0
Mobile Phase:	Hexane/Dioxane (85:15)
Flow Rate:	1.5mL/min
Detection:	UV @ 230nm
Sample:	1. Dihydrokawain 2. Yangonin 3. Kawain 4. Dihydromethysticin 5. Methysticin



Compare Surface Smoothness



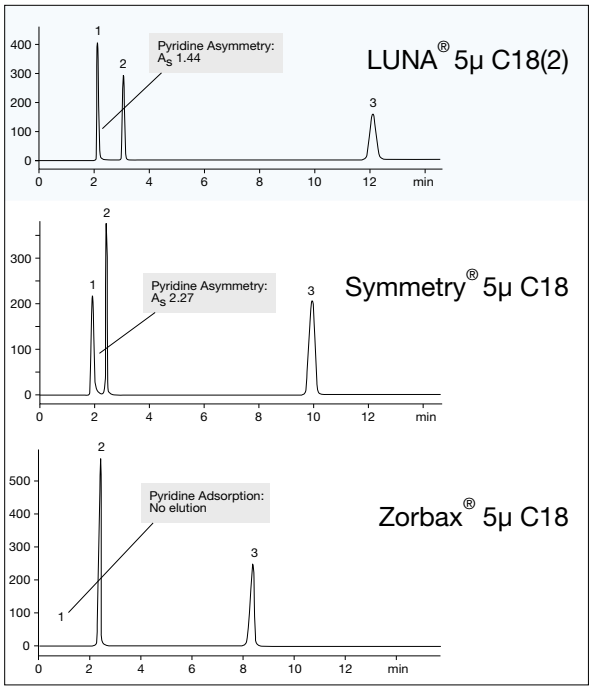
LUNA C18(2), C8(2), C5

Take One Small Step and a Giant Leap in Performance

Luna has found a place as one of the World's top reversed phase columns because it provides a measurable improvement over many HPLC columns for two important chromatographic properties: resolution and peak shape. The high efficiencies and bonded phase surface coverage provide for sharp peaks. The result:

- **Free exposed silanols virtually eliminated by complete bonding and endcapping**
- **Sharp peak shape for good method sensitivity**
- **pH stable from 1.5 to 10.0 for over 10000 hours**

Peak Asymmetry Comparison of Competing Columns**



App ID 1100

Conditions for all columns

Dimensions:	150 x 4.6mm
Mobile Phase:	Acetonitrile/Water (50:50)
Flow rate:	1.0mL/min
Detection:	UV @ 254nm
Sample:	1. Pyridine 2. Phenol 3. Toluene

Luna C18(2)

USP: L1

LC/MS Certified

Low — High

Hydrophobicity
H-Bonding
Aromatic Selectivity
Silanol Activity (pH 2.5)

see p. 365 for testing probes.

pH Stability	**1.5-10.0**
Particle Size	3µ, 5µ, 10µ, 10µ-*PREP*, and 15µ
Phase	C18, endcapped
Application	Small molecules
Strength	Wide pH stability provides longer column lifetime and greater method flexibility

Luna C8(2)

USP: L7

LC/MS Certified

Low — High

Hydrophobicity
H-Bonding
Aromatic Selectivity
Silanol Activity (pH 2.5)

see p. 365 for testing probes.

pH Stability	**1.5-10.0**
Particle Size	3µ, 5µ, 10µ, 10µ-*PREP*, and 15µ
Phase	C8, endcapped
Application	Small molecules when less retention and greater speed is desired
Strength	Lower silanol activity than C18(2) phase plus wide pH stability for longer column life and greater method flexibility

Luna C5

LC/MS Certified

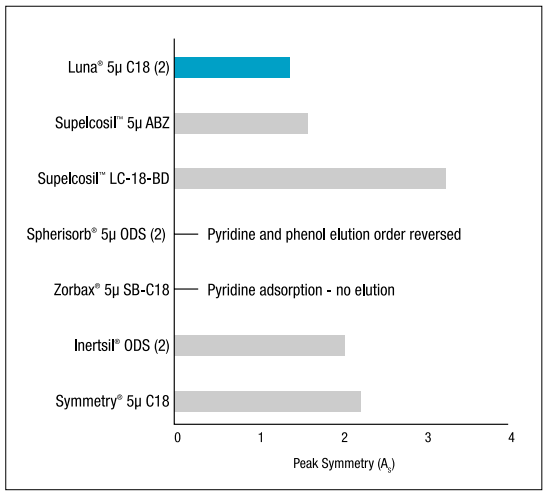
Low — High

Hydrophobicity
H-Bonding
Aromatic Selectivity
Silanol Activity (pH 2.5)

see p. 365 for testing probes.

pH Stability	**1.5-10.0**
Particle Size	5µ, 10µ
Phase	C5, endcapped
Application	Small molecules when less retention and greater speed is desired
Strength	Greater hydrolytic and pH stability compared to most C4 phases

Pyridine Peak Asymmetry Comparison**



Comparison of 7 different 5µ reversed phase columns. This survey measures the degree of silanol activity on the surface of each silica. In this survey, Luna 5µ C18(2) material demonstrates the lowest silanol activity.

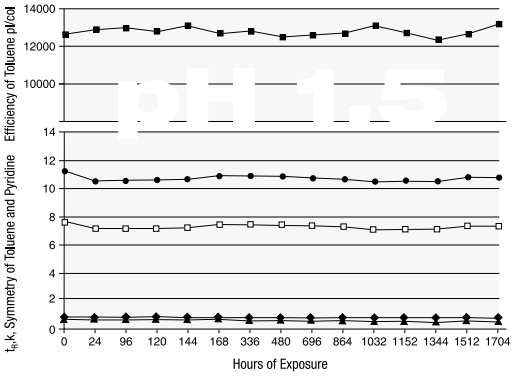
** *The comparative data presented here may not be representative for all applications.*

Luna C18(2), C8(2), C5 (continued)

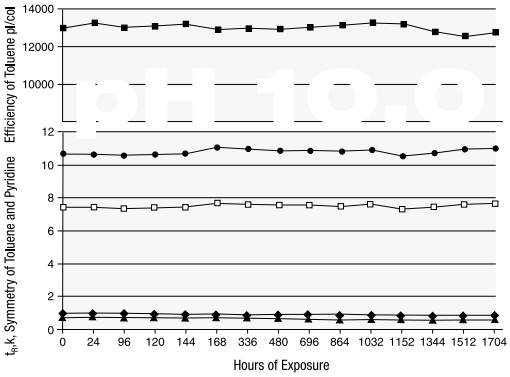
Wide pH Stability for Long Column Lifetime and Method Flexibility

Luna was one of the first columns to provide an extended pH range of 1.5 to 10** for most of its phases. The broad pH stability range is partly achieved by the density of the bonded phase. Peak shapes remain sharp independent of pH, indicating free silanols are well shielded from the analyte compounds. With Luna it is possible to work above the pK_b of many basic compounds, with the compound in a "neutral charge state", thus the basic compound becomes more hydrophobic (less polar). This will improve retention, peak shape, and reproducibility.

pH Stability Data for Luna 5µ C18(2)



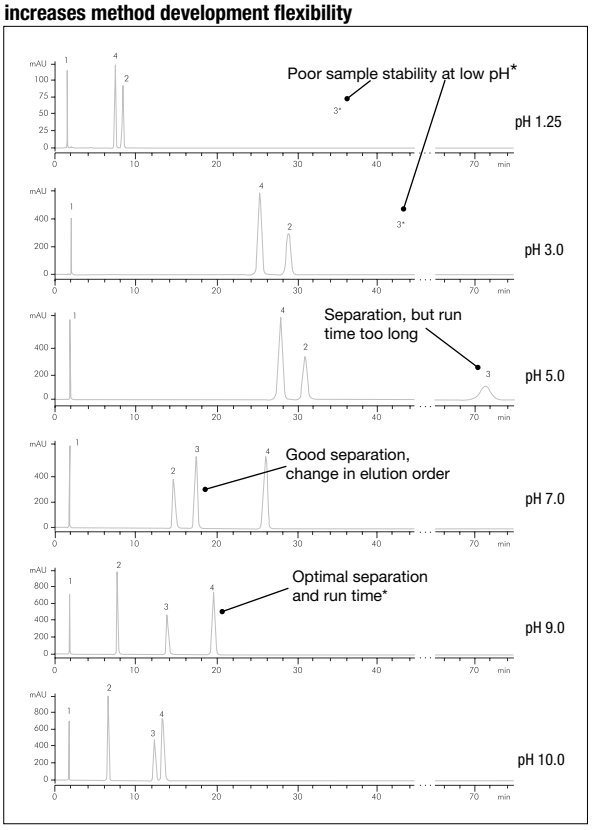
Test Conditions: Column stability tested under highly acidic conditions. Continuous flush in 0.1% TFA (pH 1.5) in Water/Acetonitrile, 50:50.



Test Conditions: Column stability tested under highly basic conditions. Continuous flush in 20mM Na_2HPO_4 (pH 10.0) in Water/Acetonitrile, 50:50.

KEY:
- Efficiency, Plates for Toluene
- t_R of Toluene (min)
- k of Toluene
- Symmetry of Toluene
- Symmetry of Pyridine

Optimizing resolution and selectivity with mobile phase pH increases method development flexibility



Conditions for Separations

Column: Luna 5µ C18
Dimensions: 150 x 4.6mm
Order No.: 00F-4041-E0
Mobile Phase: Buffer/ Acetonitrile, (95:5) pH as shown
Flow Rate: 1.0mL/min
Temperature: 40°C
Detection: UV @ 270nm
Sample:
1. Sulfanilic Acid
2. Sulfamerazine
3. Sulfisoxazole
4. Sulfapyridine

** *Luna CN is stable from pH 1.5 to 7.0 - Luna NH_2 is stable from pH 1.5 to 11.0 - Luna SCX is stable from pH 2.0 to 7.0.*

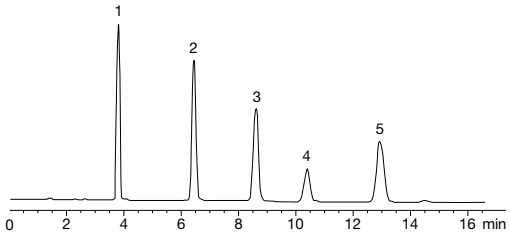
* *UV-Vis spectral evidence indicates that Sulfisoxazole is unstable at low pH.*

Luna C18(2), C8(2), C5 (continued)

App ID 1185

Steroids

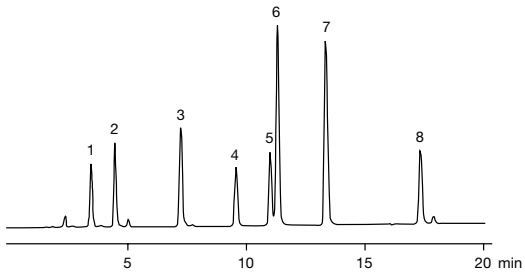
Column: Luna 5µ C18(2)
Dimensions: 150 x 4.6mm
Order No: 00F-4252-E0
Mobile Phase: 0.1% H_3PO_4 /Acetonitrile/Methanol (54:35:11)
Flow Rate: 0.75 mL/min
Detection: UV @ 254nm
Sample:
1. Hydrocortisone
2. Corticosterone
3. 11-α-Hydroxyprogesterone
4. Cortisone Acetate
5. 11-Ketoprogesterone



App ID 1201

Antibacterials

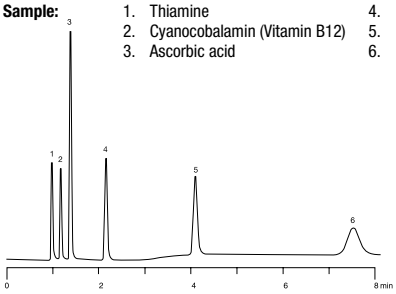
Column: Luna 5µ Phenyl-Hexyl
Dimensions: 150 x 4.6mm
Order No.: 00F-4257-E0
Mobile Phase: A: 20mM KH_2PO_4, pH 2.5 B: Acetonitrile
Gradient: A/B (80:20) to A/B (75:25) in 5 min, to A/B (55:45) in 15 min
Flow Rate: 1.0 mL/min
Detection: UV @ 254nm
Sample:
1. Carbadox
2. Thiamphenicol
3. Furazolidone
4. Oxolinic Acid
5. Sulfadimethoxine
6. Sulfaquinoxaline
7. Nalidixic Acid
8. Piromidic Acid



App ID 3305

Water Soluble Vitamins

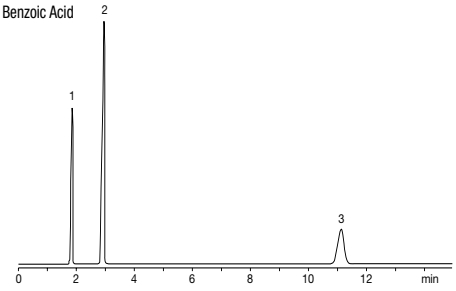
Column: Luna 5µ C18(2)
Dimensions: 150 x 4.6mm
Order No: 00F-4252-E0
Mobile Phase: 20mM Potassium Phosphate, pH 3.0/Acetonitrile (95:5)
Flow Rate: 1.5mL/min
Temperature: 22°C
Detection: UV @ 214 nm
Sample:
1. Thiamine
2. Cyanocobalamin (Vitamin B12)
3. Ascorbic acid
4. Pantothenic acid
5. Niacinamide
6. *p*-Aminobenzoic acid



App ID 1293

Acetaminophen, USP Method

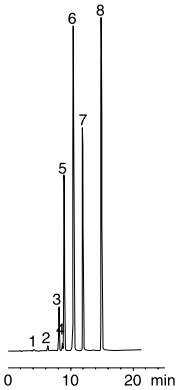
Column: Luna 5µ C18(2)
Dimensions: 150 x 4.6mm
Order No: 00F-4252-E0
Mobile Phase: Water/Methanol/Acetic Acid (69:28:3)
Flow Rate: 1.5mL/min
Detection: UV @ 275nm
Sample:
1. Acetaminophen
2. Caffeine
3. Benzoic Acid



App ID 1141

Pharmaceutical Preservatives

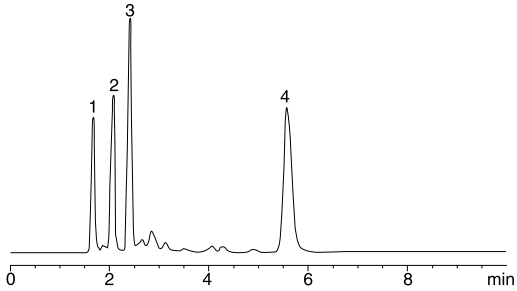
Column: Luna 5µ C5
Dimensions: 150 x 4.6mm
Order No: 00F-4043-E0
Mobile Phase: A:0.5% Acetic acid in water/acetonitrile (80:20)
B: 0.5% Acetic acid in water/acetonitrile (20:80)
Gradient: A/B (100:0) to A/B (0:100) in 30min
Flow Rate: 1mL/min
Temperature: 25°C
Detection: UV @ 254 nm
Sample:
1. Propylparaben impurity
2. Benzyl alcohol
3. Phenol
4. Benzoic acid
5. Methylparaben
6. Benzaldehyde
7. Ethylparaben
8. Propylparaben



App ID 1215

Penicillin Antibiotics

Column: Luna 5µ C8
Dimensions: 150 x 4.6mm
Order No: 00F-4040-E0
Mobile Phase: Methanol/25mM KH_2PO_4, pH 4.6 (55:45)
Flow Rate: 1mL/min
Temperature: 22°C
Detection: UV @ 254 nm
Sample:
1. Amoxicillin
2. Ampicillin
3. Penicillin G
4. Penicillin V

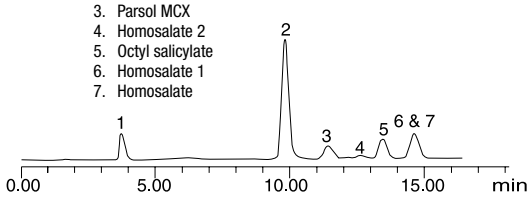


Luna C18(2), C8(2), C5 (continued)

App ID 1239

Sun Screens

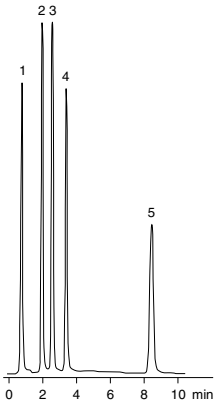
Column: Luna 5µ C18
Dimensions: 250 x 4.6mm
Order No: 00G-4041-E0
Mobile Phase: Methanol/Water (80:20)
Flow Rate: 1.5mL/min
Temperature: 22°C
Detection: UV @ 240nm
Sample:
1. Benzophenone 3
2. DCHP
3. Parsol MCX
4. Homosalate 2
5. Octyl salicylate
6. Homosalate 1
7. Homosalate



App ID 1284

Glucocorticoids

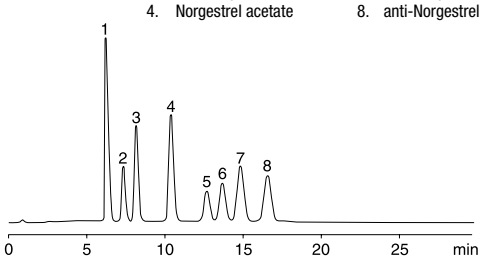
Column: Luna 5µ C8
Dimensions: 150 x 4.6mm
Order No: 00F-4040-E0
Mobile Phase: Acetonitrile/Water (50:50)
Flow Rate: 1.0mL/min
Detection: UV @ 240nm
Sample:
1. Dexamethasone 21-Phosphate
2. Prednisolone
3. Dexamethasone
4. Prednisolone 21-Acetate
5. Betamethasone 17-Valerate



App ID 9903

Hormones

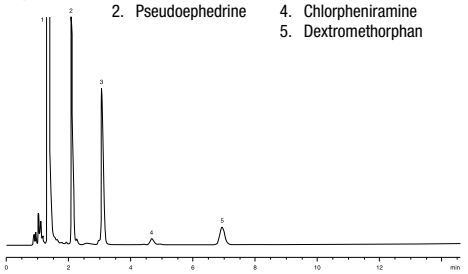
Column: Luna 5µ C18
Dimensions: 100 x 4.6mm
Order No: 00D-4041-E0
Mobile Phase: Water/Tetrahydrofuran/Acetonitile (60:22.5:17.5)
Flow Rate: 1.2mL/min
Temperature: 40°C
Detection: UV @ 244nm
Sample:
1. Norgestrel
2. syn-Norgestrel oxime
3. anti-Norgestrel oxime
4. Norgestrel acetate
5. syn-Norgestimate
6. syn-Norgestrel oxime diacetate
7. anti-Norgestimate
8. anti-Norgestrel oxime diacetate



App ID 2578

Cough and Cold Compounds

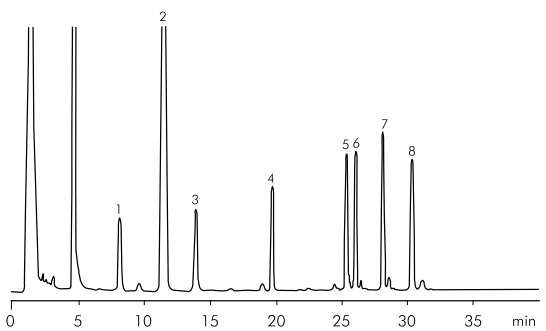
Column: Luna 5µ C8(2)
Dimensions: 150 x 4.6mm
Order No.: 00F-4249-E0
Mobile Phase: A: Methanol B: Acetonitrile w/0.1% H_3PO_4
C: Water w/0.1% H_3PO_4 and 0.1% heptane sulfonate
A/B/C (40:10:50)
Flow Rate: 1.5mL/min
Temperature: 22°C
Detection: UV@ 214nm
Sample:
1. Acetaminophen
2. Pseudoephedrine
3. Benzoic acid
4. Chlorpheniramine
5. Dextromethorphan



App ID 1288

Polyamines (Dansylated)

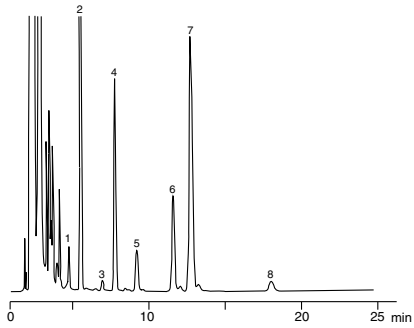
Column: Luna 5µ C18 + Security Guard
Dimensions: 250 x 4.6mm
Order No: 00G-4252-E0 and KJ0-4282 and AJ0-4287
Mobile Phase: A: 93% Methanol in Water
B: 65% Acetonitrile in Water
Gradient: A/B (0:100) to A/B (100:0) in 28 min to A/B (0:100) in 40 minutes
Temperature: 35°C
Flow Rate: 1.5mL/min
Detection: 360nm Excitation, 530nm Emission
Sample:
1. Putrescine
2. DHX
3. DHP
4. Spermidine
5. Spermine
6. Homospermine
7. Methylethylhomospermine
8. Diethylhomospermine (DEHOP)



App ID 1072

Saw Palmeto Berry, p-Bromophenacyl Esters

Column: Luna 3µ C8(2)
Dimensions: 150 x 4.6mm
Order No.: 00F-4248-E0
Mobile Phase: Acetonitrile/Water (87:13)
Flow Rate: 1.5mL/min
Temperature: 25°C
Detection: UV @ 254nm
Sample:
1. Capric Acid
2. Lauric Acid
3. Linolenic Acid
4. Myristic Acid
5. Linoleic Acid
6. Palmitic Acid
7. Oleic Acid
8. Stearic Acid

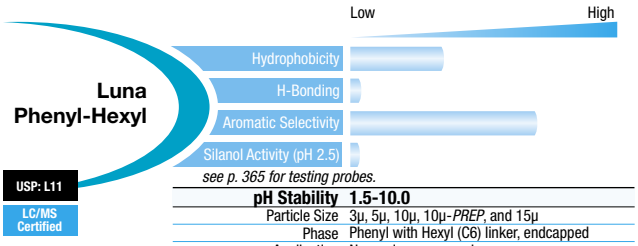


LUNA PHENYL-HEXYL

Engineered For Stability

Luna Phenyl-Hexyl can provide separations not achievable on C18 or C8 columns; such as increased retention for polar, aromatic compounds as well as reversals in analyte elution order. Luna Phenyl-Hexyl is a reproducible, extremely stable phenyl phase. Most phenyl phases use a short propyl (3 carbon) linker, which limits phase stability. The Phenyl-Hexyl bonded phase employs a phenyl ring with a hexyl (6 carbon) linker and is densely bonded to Luna silica surface. Dense bonding and the hexyl linker reduce bonded phase hydrolysis and increases chemical stability. The result:

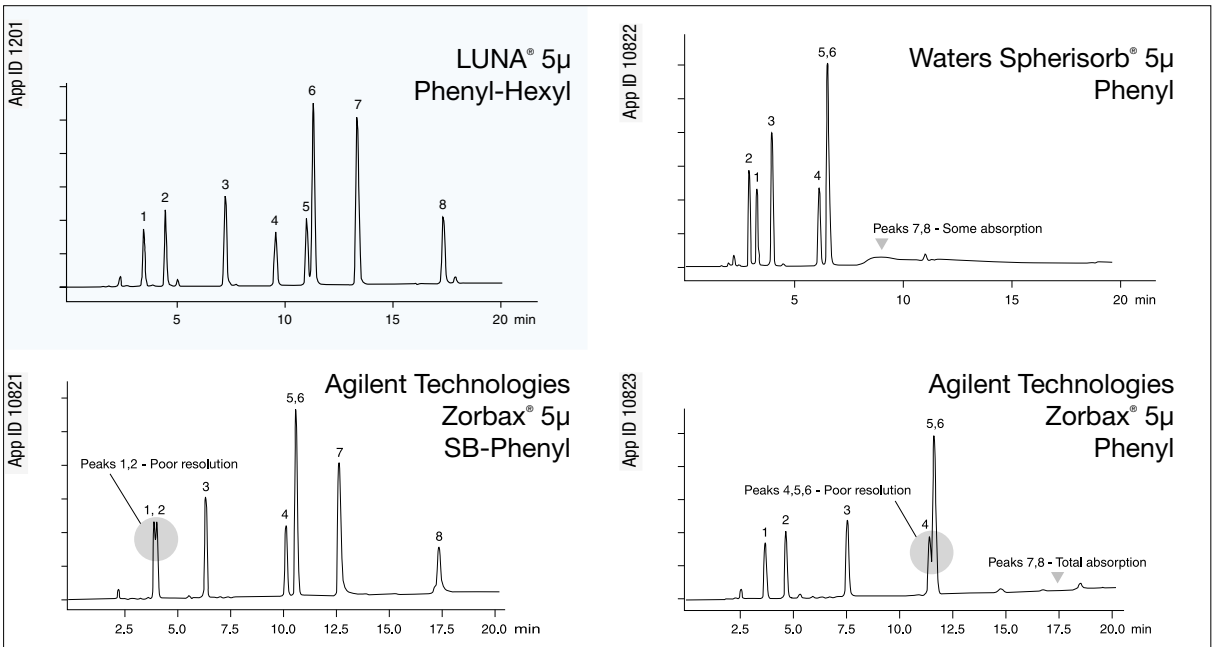
- **Highly reproducible and stable phenyl phase**
- **Dual selectivity of both phenyl phase and a short alkyl phase (C5 or C8)**
- **Excellent retention of aromatic and polar, amine compounds**
- **1.5 to 10 pH stability for over 6000 hours**



see p. 365 for testing probes.

pH Stability	**1.5-10.0**
Particle Size	3µ, 5µ, 10µ, 10µ-*PREP*, and 15µ
Phase	Phenyl with Hexyl (C6) linker, endcapped
Application	Non-polar compounds
Strength	Aromatic selectivity enhanced by higher hydrophobicity due to hexyl linker

Chromatographic Comparisons of Phenyl Columns*



Antibacterials

Conditions for all columns:

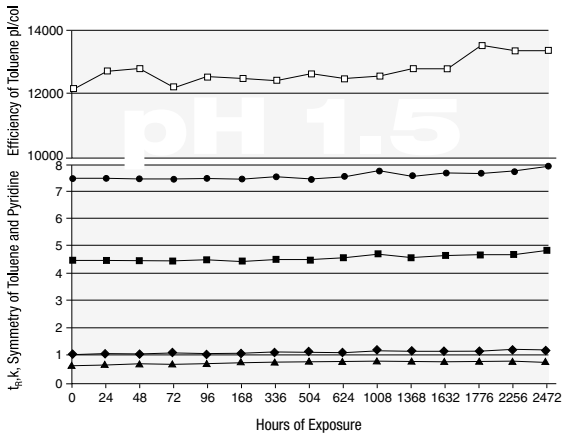
Dimensions: 150 x 4.6mm
Mobile Phase: A: 20mM KH_2PO_4, pH 2.5
B: Acetonitrile
Gradient: Start A/B (80:20) to A/B (75:25) in 5 min, go to A/B (55:45) in 15 min
Flow Rate: 1.0mL/min
Detection: UV @ 254nm
Sample:

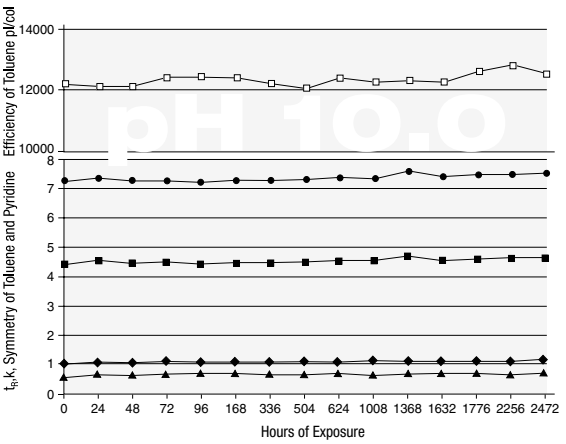
1. Carbadox
2. Thiamphenicol
3. Furazolidone
4. Oxolinic Acid
5. Sulfadimethoxine
6. Sulfaquinoxaline
7. Nalidixic Acid
8. Piromidic Acid

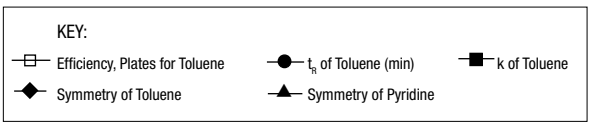
**The comparative data presented here may not be representative for all applications.*

Luna Phenyl-Hexyl (continued)

pH Stability of Luna Phenyl-Hexyl



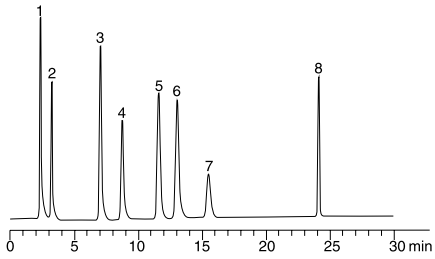




App ID 1199

Food Additives

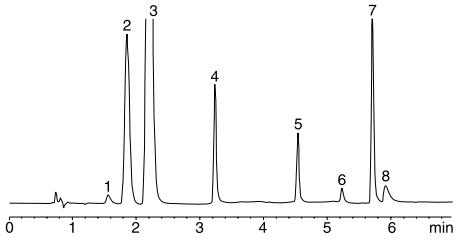
Column: Luna 5µ Phenyl-Hexyl
Dimensions: 150 x 4.6mm
Order No: 00F-4257-E0
Mobile Phase: A: 50mM KH_2PO_4 + 0.1%H_3PO_4
B: Acetonitrile
Gradient: A/B (75:25) to A/B (25:75) in 18min, hold at A/B (25:75) for 12min
Flow Rate: 1mL/min
Temperature: 22°C
Injection: 20µL
Detection: UV @ 230nm
Sample:
1. Saccharin
2. p-Hydroxybenzoic acid
3. Sorbic acid
4. p-Hydroxybenzoic acid methyl ester
5. Dehydroacetic acid
6. p-Toluic acid
7. p-Hydroxybenzoic acid ethyl ester
8. n-Propyl p-hydroxybenzoate



App ID 2572

Cough and Cold Medicine

Column: Luna 3µ Phenyl-Hexyl
Dimensions: 75 x 4.6mm
Order No: 00C-4256-E0
Mobile Phase: A: Acetonitrile
B: Methanol/20 mM KH_2PO_4 (80:20) pH 9.0
Gradient: A/B (0:100) to A/B (80:20) in 5min
Flow Rate: 1mL/min
Temperature: 22°C
Injection: 20µL
Detection: UV @ 214nm
Sample:
1. p-Aminophenol
2. Benzoic acid
3. Acetaminophen
4. Pseudoephedrine
5. Butyl paraben
6. Chlorphenaramine
7. Diphenhydramine
8. Dextromethorphan

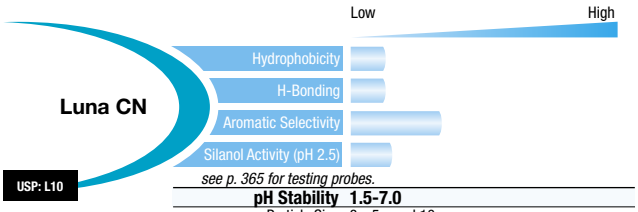


LUNA CN (CYANO)

Proven Reproducibility

For carboxyl, carbonyl and amine containing compounds, Luna CN offers a unique polar selectivity in reversed phase and normal phase mode. Luna CN provides sharp peaks and great reproducibility from run-to-run, column-to-column and batch-to-batch. Luna's smooth silica allows for a more uniform bonding with improved resistance to bonded phase hydrolysis to produce one of the most stable CN phases. The result:

- **Improved peak shape**
- **One of the most stable CN columns under reversed phase or normal phase conditions.**
- **pH stable from 1.5 to 7.0**



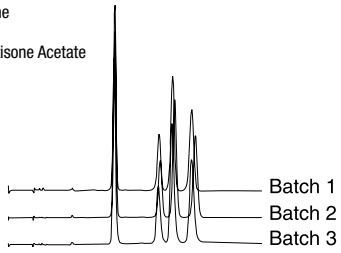
see p. 365 for testing probes.

pH Stability	**1.5-7.0**
Particle Size	3µ, 5µ, and 10µ
Phase	Cyano, endcapped
Application	Compounds with COOH, CO, NH_2, NHR_2, or NR_2
Strength	Improved reproducibility for more consistent results run-to-run, column-to-column, batch-to-batch

App ID 3464

Batch-to-Batch Reproducibility

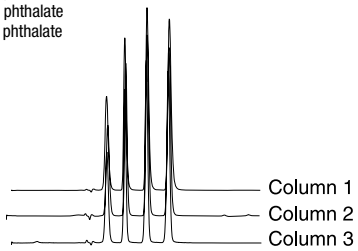
Column: Luna® 5µ CN
Dimensions: 150 x 4.6mm
Mobile Phase: A: Hexane, B: Methylene chloride/Methanol(80:20), A/B (80:20)
Flow Rate: 2.0mL/min
Detection: UV @ 254nm
Injection: 1.0µL
Temperature: Ambient
Sample:
1. Hydrocortisone
2. Prednisone
3. Cortisone
4. Hydrocortisone Acetate



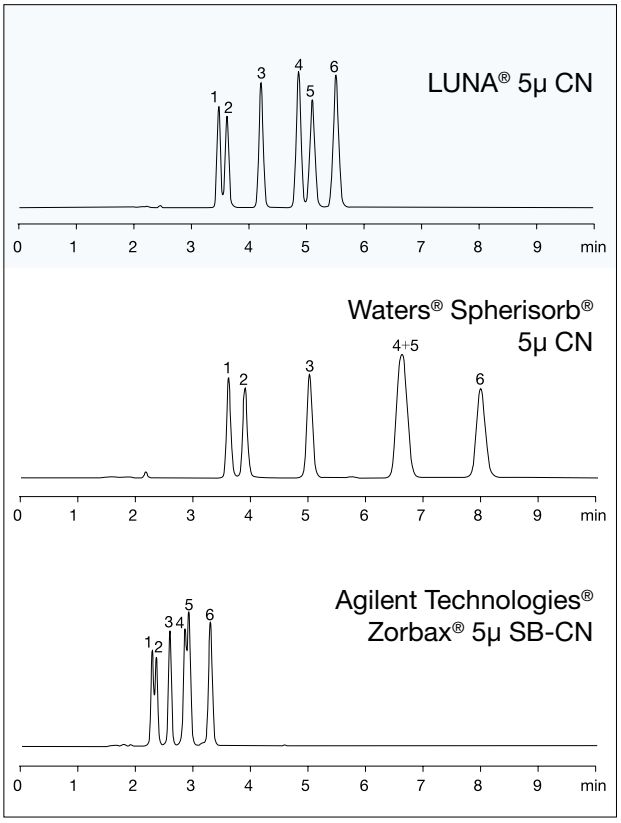
App ID 3466

Column-to-Column Reproducibility

Column: Luna® 5µ CN
Dimensions: 150 x 4.6mm
Mobile Phase: A: Hexane, B: Methylene chloride/Methanol(80:20), A/B (95:5)
Flow Rate: 1.0mL/min
Injection: 5µL
Detection: UV @ 254nm
Temperature: Ambient
Sample:
1. Dimethyl phthalate
2. Diethyl phthalate
3. Dibutyl phthalate
4. Dioctyl phthalate



Chromatographic Comparsions of CN Columns*



App ID 3471

Phthalate Esters

Conditions for all columns:
Dimensions: 150 x 4.6mm
Mobile Phase: A: Hexane, B: Methylene chloride/Methanol (80:20), A/B (99:1)
Flow Rate: 1.0mL/min
Detection: UV @ 254nm
Temperature: Ambient
Sample:
1. Di-n-octyl phthalate
2. Bis (2-Ethylhexyl) phthalate
3. Butylbenzyl phthalate
4. Di-n-butyl phthalate
5. Diethyl phthalate
6. Dimethyl phthalate

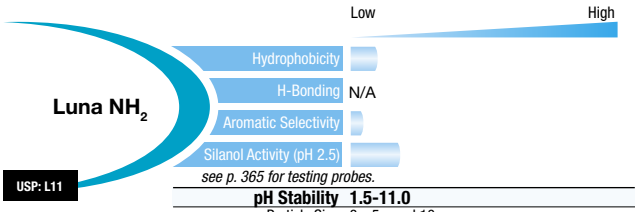
* *The comparative data presented here may not be representative for all applications.*

LUNA NH_2 (AMINO)

Developed for Ruggedness

Luna NH_2 retains hydrogen-bonding compounds under three separation modes: Reversed Phased, Normal Phase, and Ion Exchange. Luna NH_2 provides reproducible retention and selectivity with improved column lifetime. Amino columns can be problematic as the bonded phase easily hydrolyses off the silica, shortening retention time over the life of the column. The bonded phase stability of Luna NH_2 is illustrated by 1.5 to 11.0 pH stability and 100% aqueous mobile phase stability. The result:

- **Increased bonded phase stability improves reproducibility and column lifetime**
- **Excellent retention of simple sugars, complex sugars, sugar alcohols and other hydrogen-bonding compounds under Reversed Phase, Normal Phase, Ion Exchange conditions**
- **pH stable from 1.5 to 11.0**
- **Stable in 100% aqueous mobile phases**



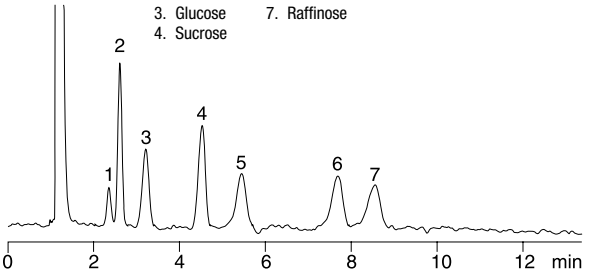
see p. 365 for testing probes.

pH Stability	**1.5-11.0**
Particle Size	3µ, 5µ, and 10µ
Phase	Amino, endcapped
Application	Compounds with COOH, CO, NH_2, NHR_2, or NR_2
Strength	Sugars by reversed phase, steroids by normal phase, oligonucleotides by ion exchange

App ID 14285

Simple Sugars

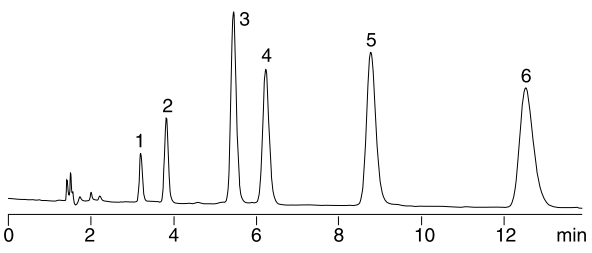
Column: Luna 5µ NH_2
Dimensions: 250 x 4.6mm
Order No: 00G-4378-E0
Mobile Phase: Acetonitrile/Water (80:20)
Flow Rate: 3mL/min
Temperature: 40°C
Detection: RI
Sample:
1. Xylose
2. Fructose
3. Glucose
4. Sucrose
5. Maltose
6. Melezitose
7. Raffinose



App ID 14299

Steroids

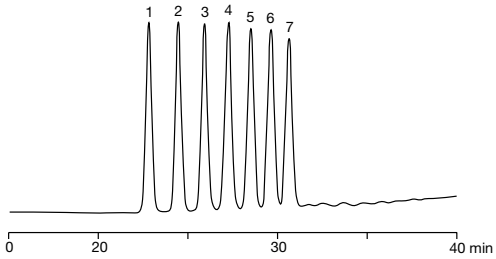
Column: Luna 5µ NH_2
Dimensions: 250 x 4.6mm
Order No: 00G-4378-E0
Mobile Phase: Hexane/Ethanol (85:15)
Flow Rate: 2mL/min
Temperature: 22°C
Detection: UV @ 240nm
Sample:
1. 11-Ketoprogesterone
2. 11-Hydroxyprogesterone
3. Cortisone Acetate
4. Prednisolone 21-Acetate
5. Cortisone
6. Prednisolone



App ID 14628

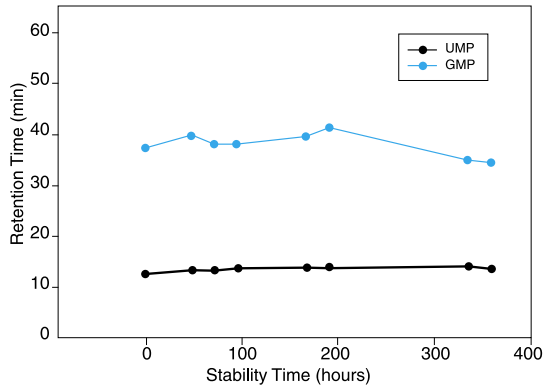
12-18mer poly-DT Oligonucleotide

Column: Luna 5µ NH_2
Dimensions: 150 x 4.6mm
Order No: 00F-4378-E0
Mobile Phase:
A) 20mM Sodium Phosphate, 10% Acetonitrile, pH 7.0
B) 20mM Sodium Phosphate, 10% Acetonitrile, 1M Sodium Chloride, pH 7.0
Gradient: A/B (75:25) to A/B (5:95) in 50 minutes
Flow Rate: 1mL/min
Temperature: 40°C
Detection: UV @ 260nm
Sample: 12-18mer poly-DT oligonucleotide standard



Stability in 100% Aqueous Mobile Phase

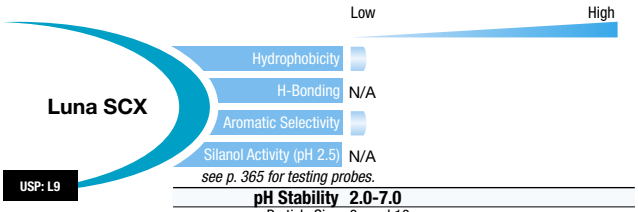
Column: Luna 5µ NH_2
Dimensions: 250 x 4.6mm
Order No: 00G-4378-E0
Mobile Phase: 20mM Potassium Phosphate Buffer pH 2.7
Flow Rate: 1.5mL/min
Detector: UV@254nm
Temperature: Ambient
Injection: 2.5µL
Conditions: Continuously flushed at 1.0mL/min using 100% 20mM Potassium Phosphate Buffer pH 2.7 between injections



LUNA SCX (STRONG CATION EXCHANGE)

Luna SCX provides excellent resolution and peak shape of basic, cationic compounds. However, most SCX columns show poor peak shape and bad resolution causing many chromatographers to ignore this important phase for small molecule method development, until now. Luna SCX provides excellent durability over a wide pH range of 2 to 7.0 - wide pH stability is critical as mobile phase pH is a key factor in ion exchange chromatography. The result:

- **Resolving power and sharp peak shape to separate complex cationic/basic and nitrogen containing compounds**
- **5 and 10µ columns and bulk media for analytical through preparative separations**
- **Good reproducibility assured by 25 QC tests and reported on a Materials Validation Document (MVD) accompanying each column**



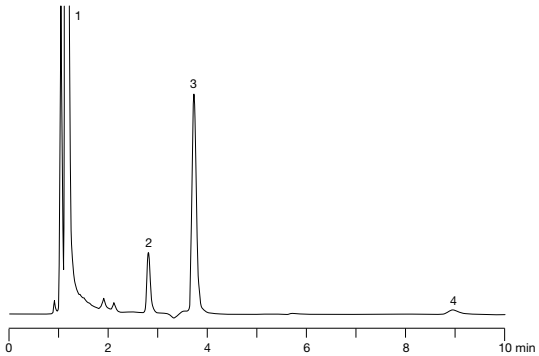
see p. 365 for testing probes.

pH Stability	**2.0-7.0**
Particle Size	3µ and 10µ
Phase	Benzene Sulfonic Acid, Strong Cation Exchange
Application	Amine and polyamine containing compounds
Strength	Guaranteed to provide sharper peak shape and better resolution compared to traditional SCX columns

App ID 14555

Childrens Tylenol Cold Syrup

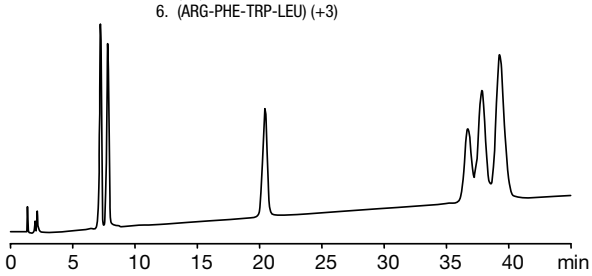
Column: Luna 5µ SCX 100Å
Dimension: 150 x 4.6mm
Order No: 00F-4398-E0
Mobile Phase: 50mM KH_2PO_4, pH 2.5/Acetonitrile (35:65)
Injection Volume: 1µL
Flow Rate: 1.5mL/min
Detection: UV @ 210nm
Sample Prep: Dissolve 1 part Childrens Tylenol Cold in 10 parts Methanol
Sample:
1. Acetaminophen
2. Pseudoephedrine
3. Dextromethorphan
4. Chlorpheniramine



App ID 14765

Peptides

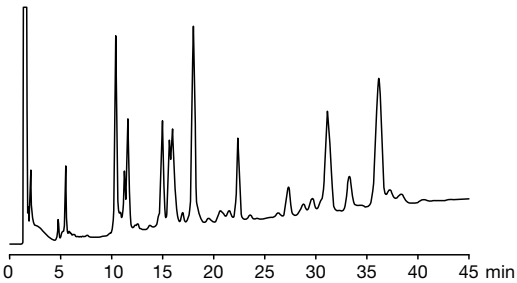
Column: Luna 5µ SCX
Dimensions: 150 x 4.6mm
Order No: 00F-4398-E0
Mobile Phase: A) 20mM Potassium Phosphate, 25% Acetonitrile, pH 2.5
B) 20mM Potassium Phosphate, 25% Acetonitrile, 400mM Potassium Chloride, pH 2.5
Gradient: A/B (95:5) to A/B (10:90) in 45 minutes
Flow Rate: 1mL/min
Temperature: 35°C
Detection: UV @ 215nm
Injection Volume: 2 µL (5µg on column)
Sample: Peptide Mixture - Substance P
1. Fragment 5-11 (+1)
2. Fragment 4-11 (+1)
3. Fragment 2-11 (+2)
4. Fragment 1-9 (+3)
5. (+3)
6. (ARG-PHE-TRP-LEU) (+3)



App ID 14767

Tryptic Digest of Bovine Cytochrome C

Column: Luna 5µ SCX
Dimensions: 150 x 4.6mm
Order No: 00F-4398-E0
Mobile Phase: A) 20mM Potassium Phosphate, 25% Acetonitrile, pH 2.5
B) 20mM Potassium Phosphate, 25% Acetonitrile, 350mM Potassium Chloride, pH 2.5
Gradient: 100% A to 100% B in 50 minutes
Flow Rate: 1mL/min
Temperature: 35°C
Detection: UV @ 215nm
Injection Volume: 50µL (20µg on column)
Sample: Bovine Cytochrome *c* trypsin digest

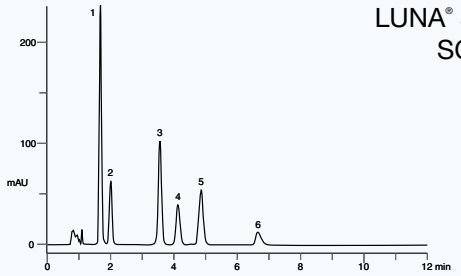


SCX Method Development and pH: *The standard operating pH range for Luna SCX is 2.0 to 7.0. Most SCX methods are typically run between pH 2.0 and 5.0 for optimal performance. This ensures that nitrogen-containing analytes, especially those with adjacent conjugated system are protonated. Running in highly acidic (pH < 2.0) or basic (pH > 7.0) mobile phases may cause this phase to undergo degradation, as is common for all silica-based SCX phases.*

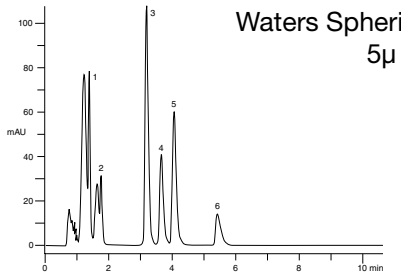
Luna SCX (continued)

Chromatographic Comparisons of SCX Columns*

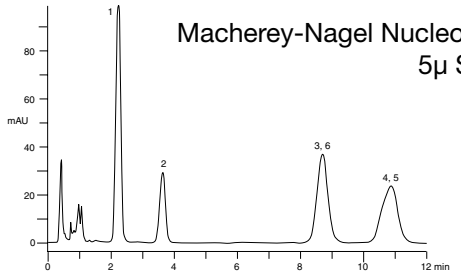
App ID 14547



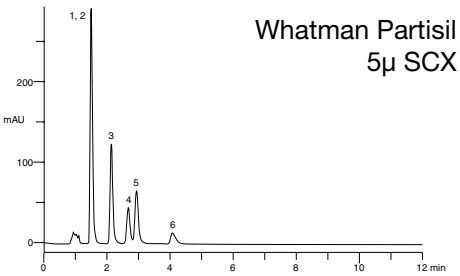
App ID 14548



App ID 14549



App ID 14550



Cocaine and Metabolites

Conditions for all columns:

Columns:	Luna 5µ SCX 100Å Spherisorb 5µ SCX 80Å Nucleosil 5µ SA 100Å Partisil 5µ SCX 85Å
Dimensions:	150 x 4.6mm
Mobile Phase:	50mM KH_2PO_4, pH 2.5 /Acetonitrile (65:35)
Injection Volume:	20µL
Flow Rate:	2.0mL/min
Detection:	UV @ 210nm

Sample:
1. m-Hydroxylbenzoyl Ecgonine (80µL/mL)
2. Norbenzoyl Ecgonine (50µL/mL)
3. Norcocaine (100µL/mL)
4. Benzoyl Ecgonine Isopropyl Ester (50µL/mL)
5. Cocaine (85µL/mL)
6. Ecgonine Methyl Ester (690µL/mL)

* *The comparative data presented here may not be representative for all applications.*

Excellent Reproducibility

It is tough to meet Luna quality standards. The Silica Reproducibility and Bonded Phase Reproducibility Tanaka plots below illustrate the reproducibility of 13 different quality control parameters for 9 batches of Luna material - nearly no variation is observed. Each batch represents hours of quality control testing for over 25 different parameters. We know chromatographers rely on Luna for rugged, reproducible methods worldwide; therefore, an extensive Materials Validation Document (MVD) accompanying each column confirms consistent column specifications and consistent performance.

Material Validation Document

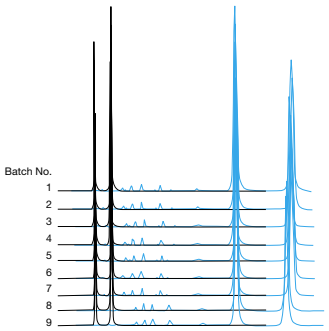
Quality Proven

Extensive testing and quality control test data is shown on the Materials Validation Document (MVD) that accompanies each 3 and 5µ Luna column. Over 25 individual chemical and physical testes are performed and documented on the MVD, including:

- **Particle Analysis**
  - Particle Size
  - Pore Diameter
  - Particle Size Distribution
  - Surface Area
- **Total Metal Content**
- **Bonded Phase Coverage**
  - Total Carbon
  - Surface Coverage
- **Diagnostic Chromatography Test**
  - Inertness
  - Metal Sensitivity
  - Hydrophobic Index
- **Performance Chromatography Test**
  - Basic Drug Standards
  - Longevity Tests (pH Stability)
  - Scanning Electron Microscopy (measures surface smoothness and particle shape)

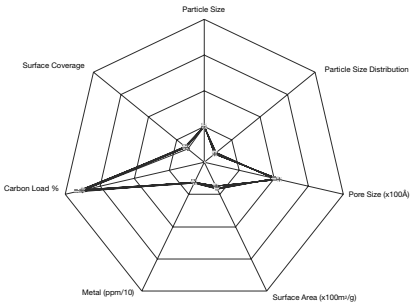
Column-to-Column Reproducibility

The chromatograms show consistency of inertness and hydrophobicity for Luna 5µ C18(2) columns from 9 different batches. Almost no variation is observed.



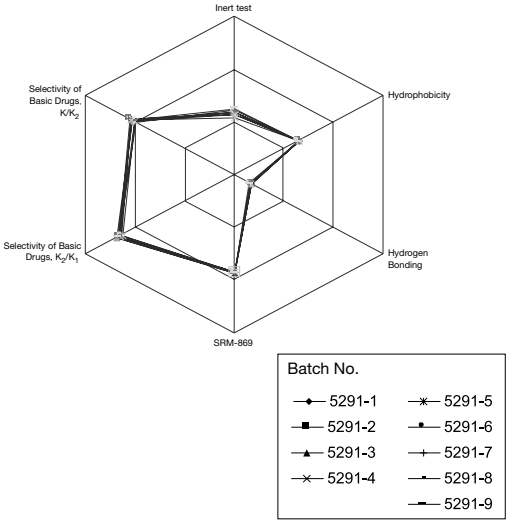
Silica Reproducibility

Quality control test data designed to monitor subtle changes in Luna silica that may affect reproducibility.



Bonded Phase Reproducibility

Bonding reproducibility test data from 9 Luna 5µ C18(2) batches. Since differences in bonded phase coverage can show selectivity changes, each Luna batch undergoes 6 tests for bonding.



LUNA®

ORDERING INFORMATION

3µ and 5µ Capillary Columns (mm)

Phases	50 x 0.30	150 x 0.30	250 x 0.30	50 x 0.50	150 x 0.50	250 x 0.50
3µ C8(2)	00B-4248-AC	00F-4248-AC	00G-4248-AC	00B-4248-AF	00F-4248-AF	00G-4248-AF
3µ C18(2)	00B-4251-AC	00F-4251-AC	00G-4251-AC	00B-4251-AF	00F-4251-AF	00G-4251-AF
5µ C8(2)	00B-4249-AC	00F-4249-AC	00G-4249-AC	00B-4249-AF	00F-4249-AF	00G-4249-AF
5µ C18(2)	00B-4252-AC	00F-4252-AC	00G-4252-AC	00B-4252-AF	00F-4252-AF	00G-4252-AF

See p. 265 for Fused Silica Capillary Adapter and Capillary Guard Columns.

MercuryMS™ LC/MS Cartridges (mm)

Qty Pricing		10 x 2.0	10 x 4.0	20 x 2.0	20 x 4.0
3µ	**Phase**				
LUNA	C18(2)	00N-4251-B0-CE	00N-4251-D0-CE	00M-4251-B0-CE	00M-4251-D0-CE
LUNA	C8(2)	00N-4248-B0-CE	00N-4248-D0-CE	00M-4248-B0-CE	00M-4248-D0-CE
5µ					
LUNA	C18(2)	00N-4252-B0-CE	00N-4252-D0-CE	00M-4252-B0-CE	00M-4252-D0-CE
LUNA	C8(2)	00N-4249-B0-CE	00N-4249-D0-CE	00M-4249-B0-CE	00M-4249-D0-CE

MercuryMS Cartridges require holder, see p. 268

SecurityGuard™ Cartridges require universal holder Order No.: KJ0-4282

3µ Microbore and Minibore Columns (mm)

Phases	30 x 1.0	50 x 1.0	150 x 1.0	30 x 2.0	50 x 2.0	100 x 2.0	150 x 2.0	SecurityGuard™ Cartridges 4 x 2.0mm /10pk	SecurityGuard™ Cartridges 4 x 3.0mm /10pk
Silica(2)	—	—	—	00A-4162-B0	00B-4162-B0	00D-4162-B0	00F-4162-B0	AJ0-4347	AJ0-4348
C8(2)	00A-4248-A0	00B-4248-A0	00F-4248-A0	00A-4248-B0	00B-4248-B0	00D-4248-B0	00F-4248-B0	AJ0-4289	AJ0-4290
C18(2)	00A-4251-A0	00B-4251-A0	00F-4251-A0	00A-4251-B0	00B-4251-B0	00D-4251-B0	00F-4251-B0	AJ0-4286	AJ0-4287
CN	—	—	—	00A-4254-B0	00B-4254-B0	00D-4254-B0	00F-4254-B0	AJ0-4304	AJ0-4305
Phenyl-Hexyl	00A-4256-A0	00B-4256-A0	—	00A-4256-B0	00B-4256-B0	00D-4256-B0	00F-4256-B0	AJ0-4350	AJ0-4351
NH_2	—	—	00F-4377-A0	00A-4377-B0	00B-4377-B0	00D-4377-B0	00F-4377-B0	AJ0-4301	AJ0-4302
								for ID: 2.0-3.0mm	3.2-8.0mm

3µ Analytical Columns (mm)

Phases	30 x 3.0	50 x 3.0	150 x 3.0	30 x 4.6	50 x 4.6	75 x 4.6	100 x 4.6	150 x 4.6	SecurityGuard™ Cartridges 4 x 2.0mm /10pk	SecurityGuard™ Cartridges 4 x 3.0mm /10pk
Silica(2)	—	—	00F-4162-Y0	—	00B-4162-E0	—	00D-4162-E0	00F-4162-E0	AJ0-4347	AJ0-4348
C8(2)	00A-4248-Y0	00B-4248-Y0	00F-4248-Y0	00A-4248-E0	00B-4248-E0	00C-4248-E0	00D-4248-E0	00F-4248-E0	AJ0-4289	AJ0-4290
C18(2)	00A-4251-Y0	00B-4251-Y0	00F-4251-Y0	00A-4251-E0	00B-4251-E0	00C-4251-E0	00D-4251-E0	00F-4251-E0	AJ0-4286	AJ0-4287
CN	—	00B-4254-Y0	00F-4254-Y0	00A-4254-E0	00B-4254-E0	00C-4254-E0	00D-4254-E0	00F-4254-E0	AJ0-4304	AJ0-4305
Phenyl-Hexyl	—	00B-4256-Y0	00F-4256-Y0	00A-4256-E0	00B-4256-E0	00C-4256-E0	00D-4256-E0	00F-4256-E0	AJ0-4350	AJ0-4351
NH_2	—	00B-4377-Y0	00F-4377-Y0	00A-4377-E0	00B-4377-E0	—	00D-4377-E0	00F-4377-E0	AJ0-4301	AJ0-4302
									for ID: 2.0-3.0mm	3.2-8.0mm

LUNA®

If Luna does not provide at least an equivalent separation as compared to a competing column of the same particle size, similar phase and dimensions, send in your comparative data within 45 days and keep the Luna column for FREE.

ORDERING INFORMATION

SecurityGuard™Cartridges require universal holder Order No.: KJ0-4282

5µ Microbore and Minibore Columns (mm)								SecurityGuard™Cartridges	
Phases	50 x 1.0	150 x 1.0	250 x 1.0	30 x 2.0	50 x 2.0	150 x 2.0	250 x 2.0	4 x 2.0mm /10pk	4 x 3.0mm /10pk
Silica(2)	—	—	—	—	00B-4274-B0	00F-4274-B0	00G-4274-B0	AJ0-4347	AJ0-4348
C5	—	—	—	00A-4043-B0	00B-4043-B0	00F-4043-B0	—	AJ0-4292	AJ0-4293
C8	—	—	—	00A-4040-B0	00B-4040-B0	00F-4040-B0	—	AJ0-4289	AJ0-4290
C8 (2)	00B-4249-A0	00F-4249-A0	—	00A-4249-B0	00B-4249-B0	00F-4249-B0	00G-4249-B0	AJ0-4289	AJ0-4290
C18	—	—	—	00A-4041-B0	00B-4041-B0	00F-4041-B0	00G-4041-B0	AJ0-4286	AJ0-4287
C18 (2)	00B-4252-A0	00F-4252-A0	00G-4252-A0	00A-4252-B0	00B-4252-B0	00F-4252-B0	00G-4252-B0	AJ0-4286	AJ0-4287
CN	—	—	—	00A-4255-B0	00B-4255-B0	00F-4255-B0	00G-4255-B0	AJ0-4304	AJ0-4305
Phenyl-Hexyl	00B-4257-A0	00F-4257-A0	—	00A-4257-B0	00B-4257-B0	00F-4257-B0	00G-4257-B0	AJ0-4350	AJ0-4351
NH_2	—	00F-4378-A0	—	00A-4378-B0	00B-4378-B0	00F-4378-B0	00G-4378-B0	AJ0-4301	AJ0-4302
								for ID: 2.0-3.0mm	3.2-8.0mm

5µ Analytical Columns (mm)								SecurityGuard™Cartridges	
Phases	30 x 3.0	50 x 3.0	150 x 3.0	250 x 3.0	30 x 4.6	50 x 4.6	75 x 4.6	4 x 2.0mm /10pk	4 x 3.0mm /10pk
Silica(2)	—	—	—	—	—	00B-4274-E0	—	AJ0-4347	AJ0-4348
C5	—	—	00F-4043-Y0	—	—	00B-4043-E0	—	AJ0-4292	AJ0-4293
C8	—	—	00F-4040-Y0	00G-4040-Y0	00A-4040-E0	00B-4040-E0	00C-4040-E0	AJ0-4289	AJ0-4290
C8(2)	—	00B-4249-Y0	00F-4249-Y0	00G-4249-Y0	00A-4249-E0	00B-4249-E0	00C-4249-E0	AJ0-4289	AJ0-4290
C18	—	—	00F-4041-Y0	00G-4041-Y0	00A-4041-E0	00B-4041-E0	00C-4041-E0	AJ0-4286	AJ0-4287
C18(2)	00A-4252-Y0	00B-4252-Y0	00F-4252-Y0	00G-4252-Y0	00A-4252-E0	00B-4252-E0	00C-4252-E0	AJ0-4286	AJ0-4287
CN	—	00B-4255-Y0	00F-4255-Y0	00G-4255-Y0	00A-4255-E0	00B-4255-E0	00C-4255-E0	AJ0-4304	AJ0-4305
Phenyl-Hexyl	00A-4257-Y0	00B-4257-Y0	00F-4257-Y0	00G-4257-Y0	00A-4257-E0	00B-4257-E0	00C-4257-E0	AJ0-4350	AJ0-4351
NH_2	—	00B-4378-Y0	00F-4378-Y0	00G-4378-Y0	00A-4378-E0	00B-4378-E0	00C-4378-E0	AJ0-4301	AJ0-4302
SCX	—	—	—	—	—	00B-4398-E0	—	AJ0-4307	AJ0-4308
								for ID: 2.0-3.0mm	3.2-8.0mm

LUNA®

ORDERING INFORMATION

SecurityGuard™ Cartridges require universal holder Order No.: KJ0-4282

5µ Analytical, Semi-Prep and Preparative Columns (mm)								SecurityGuard™ Cartridges		
Phases	100 x 4.6	150 x 4.6	250 x 4.6	250 x 10	250 x 15	250 x 21.2	250 x 30	4 x 2.0mm /10pk	4 x 3.0mm /10pk	10 x 10mm /3pk
Silica(2)	00D-4274-E0	00F-4274-E0	00G-4274-E0	00G-4274-N0	—	00G-4274-P0	00G-4274-U0	AJ0-4347	AJ0-4348	AJ0-7223
C5	00D-4043-E0	00F-4043-E0	00G-4043-E0	00G-4043-N0	—	—	—	AJ0-4292	AJ0-4293	AJ0-7372
C8	00D-4040-E0	00F-4040-E0	00G-4040-E0	00G-4040-N0	—	—	—	AJ0-4289	AJ0-4290	AJ0-7222
C8(2)	00D-4249-E0	00F-4249-E0	00G-4249-E0	00G-4249-N0	00G-4249-AK	00G-4249-P0	00G-4249-U0	AJ0-4289	AJ0-4290	AJ0-7222
C18	00D-4041-E0	00F-4041-E0	00G-4041-E0	00G-4041-N0	—	—	—	AJ0-4286	AJ0-4287	AJ0-7221
C18(2)	00D-4252-E0	00F-4252-E0	00G-4252-E0	00G-4252-N0	00G-4252-AK	00G-4252-P0	00G-4252-U0	AJ0-4286	AJ0-4287	AJ0-7221
CN	00D-4255-E0	00F-4255-E0	00G-4255-E0	00G-4255-N0	—	—	—	AJ0-4304	AJ0-4305	AJ0-7313
Phenyl-Hexyl	00D-4257-E0	00F-4257-E0	00G-4257-E0	00G-4257-N0	00G-4257-AK	00G-4257-P0	00G-4257-U0	AJ0-4350	AJ0-4351	AJ0-7314
NH_2	00D-4378-E0	00F-4378-E0	00G-4378-E0	00G-4378-N0	—	00G-4378-P0	00G-4378-U0	AJ0-4301	AJ0-4302	AJ0-7364
SCX	00D-4398-E0	00F-4398-E0	00G-4398-E0	00G-4398-N0	—	00G-4398-P0	—	AJ0-4307	AJ0-4308	AJ0-7369
								for ID: 2.0-3.0mm	3.2-8.0mm	9-16mm

10µ Semi-Prep and Preparative Columns (mm)							SecurityGuard™ Guards	SecurityGuard™ Cartridges
Phases	250 x 4.6	250 x 10	250 x 15	250 x 21.2	250 x 30	250 x 50	50 x 50	10 x 10mm /3pk
Silica(2)	00G-4091-E0	00G-4091-N0	—	00G-4091-P0	—	00G-4091-V0	03B-4091-V0	AJ0-7223
C5	00G-4092-E0	00G-4092-N0	—	00G-4092-P0	—	—	—	AJ0-7372
C8	00G-4093-E0	00G-4093-N0	—	00G-4093-P0	—	—	—	AJ0-7222
C8(2)	00G-4250-E0	00G-4250-N0	00G-4250-AK	00G-4250-P0	00G-4250-U0	00G-4250-V0	03B-4250-V0	AJ0-7222
C18	00G-4094-E0	00G-4094-N0	—	00G-4094-P0	—	—	—	AJ0-7221
C18(2)	00G-4253-E0	00G-4253-N0	00G-4253-AK	00G-4253-P0	00G-4253-U0	00G-4253-V0	03B-4253-V0	AJ0-7221
CN	00G-4300-E0	00G-4300-N0	—	00G-4300-P0	—	00G-4300-V0	03B-4300-V0	AJ0-7313
Phenyl-Hexyl	00G-4285-E0	00G-4285-N0	—	00G-4285-P0	00G-4285-U0	00G-4285-V0	03B-4285-V0	AJ0-7314
NH_2	00G-4379-E0	00G-4379-N0	—	00G-4379-P0	—	—	—	AJ0-7364
SCX	00G-4401-E0	00G-4401-N0	—	00G-4401-P0	—	—	—	AJ0-7369
								for ID: 9-16mm

15µ Preparative and Pilot Scale Columns (mm)					Guards
Phases	250 x 4.6	250 x 21.2	250 x 30	250 x 50	50 x 50
Silica(2)	00G-4271-E0	00G-4271-P0	00G-4271-U0	00G-4271-V0	03B-4271-V0
C8(2)	00G-4272-E0	00G-4272-P0	00G-4272-U0	00G-4272-V0	03B-4272-V0
C18(2)	00G-4273-E0	00G-4273-P0	00G-4273-U0	00G-4273-V0	03B-4273-V0
Phenyl-Hexyl	00G-4286-E0	00G-4286-P0	00G-4286-U0	00G-4286-V0	03B-4286-V0

See p. 213 for Semi-Prep SecurityGuard Cartridge Holders

Improve analyte sensitivity and reduce baseline noise with Strata SPE tubes and well plates.
See pp. 9-26 for more information

COMBI-HTS™ PURIFICATION COLUMNS

New, 21.2mm and 30mm ID columns provide exceptional loadability and durability for high-throughput purifications. Luna Combi-HTS columns utilize the same Luna material, but undergo additional QC at higher flow rates to ensure excellent performance under high pressure and high flow conditions.

guarantee

If Luna does not provide at least an equivalent separation as compared to a competing column of the same particle size, similar phase and dimensions, send in your comparative data within 45 days and keep the Luna column for FREE.

ORDERING INFORMATION

5µ Luna Combi-HTS Purification Columns (mm)

Phases	50 x 21.2	100 x 21.2	50 x 30	75 x 30	100 x 30
Combi-HTS C8(2)	00B-4384-P0	00D-4384-P0	00B-4384-U0	00C-4384-U0	00D-4384-U0
Combi-HTS C18(2)	00B-4383-P0	00D-4383-P0	00B-4383-U0	00C-4383-U0	00D-4383-U0

METHOD DEVELOPMENT KITS

Luna Method Development Kits combine the excellent performance of Luna HPLC columns with either 3 or 5 different selectivities. The column kits include a Luna Phenyl-Hexyl (moderate polarity) and your choice of a Luna CN (polar) or a C8(2) or C18(2) (non-polars).

METHOD VALIDATION KITS

Three columns of the same phase from three different batches provide an excellent benchmark for method validation. Method reproducibility is easily and quickly assessed, clearly demonstrating chromatographic performance validation potential and long term compliance with Luna Method Validation Kits.

ORDERING INFORMATION

Method Development Kits

Order No.	Description	Dimensions (mm)	Unit	Price
KH0-4760	Luna Method Development Kit (5 columns) 1 each of 5µ C18(2), C8(2), C5, CN, Phenyl-Hexyl phases	150 x 4.6	5/pk	
KH0-4354	Luna Rapid-MD Kit (3 columns) 1 each of 3µ C18(2), C8(2) and Phenyl-Hexyl phases	50 x 4.6	3/pk	
KH0-4761	Luna Selectivity Kit 1 (3 columns) 1 each of 5µ C18(2), Phenyl-Hexyl, CN phases	150 x 4.6	3/pk	
KH0-4762	Luna Selectivity Kit 2 (3 columns) 1 each of 5µ C8(2), Phenyl-Hexyl, CN phases	150 x 4.6	3/pk	

Method Validation Kits

Order No.	Description	Dimensions (mm)*	Unit	Price
KH0-4355	Luna 5µ C18 Method Validation Kit	150 x 4.6	3/pk	
KH0-4356	Luna 5µ C18(2) Method Validation Kit	150 x 4.6	3/pk	
KH0-4357	Luna 5µ C8 Method Validation Kit	150 x 4.6	3/pk	
KH0-4358	Luna 5µ C8(2) Method Validation Kit	150 x 4.6	3/pk	
KH0-4359	Luna 5µ Phenyl-Hexyl Method Validation Kit	150 x 4.6	3/pk	

**Other dimensions available on request.*

See p. 270 for LC/MS Computer-Based Training Program.

BULK MATERIAL

ORDERING INFORMATION

10µ Bulk Packings

Phases	100g	1kg	5kg	10kg	50kg	100kg
Silica(2)	04G-4091	04K-4091	04L-4091	04M-4091	04N-4091	04P-4091
Bonded Silica						
C5	04G-4092	04K-4092	04L-4092	04M-4092	04N-4092	04P-4092
C8	04G-4093	04K-4093	04L-4093	04M-4093	04N-4093	04P-4093
C8(2)	04G-4250	04K-4250	04L-4250	04M-4250	04N-4250	04P-4250
C18	04G-4094	04K-4094	04L-4094	04M-4094	04N-4094	04P-4094
C18(2)	04G-4253	04K-4253	04L-4253	04M-4253	04N-4253	04P-4253
CN	04G-4300	04K-4300	04L-4300	04M-4300	04N-4300	04P-4300
NH_2	04G-4379	04K-4379	04L-4379	04M-4379	04N-4379	04P-4379
SCX	04G-4401	04K-4401	04L-4401	04M-4401	04N-4401	04P-4401
Phenyl-Hexyl						
Phenyl-Hexyl	04G-4285	04K-4285	04L-4285	04M-4285	04N-4285	04P-4285

10µ-*PREP* Bulk Packings

Lower cost excellent performance alternative to LUNA 10µ.

Phases	100g	1kg	5kg	10kg	50kg	100kg
Silica(2)	04G-4322	04K-4322	04L-4322	04M-4322	04N-4322	04P-4322
Bonded Silica						
C8(2)	04G-4323	04K-4323	04L-4323	04M-4323	04N-4323	04P-4323
C18(2)	04G-4324	04K-4324	04L-4324	04M-4324	04N-4324	04P-4324
Phenyl-Hexyl						
Phenyl-Hexyl	04G-4325	04K-4325	04L-4325	04M-4325	04N-4325	04P-4325

15µ Bulk Packings

Phases	100g	1kg	5kg	10kg	50kg	100kg
Silica(2)	04G-4271	04K-4271	04L-4271	04M-4271	04N-4271	04P-4271
Bonded Silica						
C8(2)	04G-4272	04K-4272	04L-4272	04M-4272	04N-4272	04P-4272
C18(2)	04G-4273	04K-4273	04L-4273	04M-4273	04N-4273	04P-4273
Phenyl-Hexyl						
Phenyl-Hexyl	04G-4286	04K-4286	04L-4286	04M-4286	04N-4286	04P-4286