Bulk HPLC Media

- **Grams to Multi-Kilogram, Phenomenex can deliver**
- **Over 20 different media available**
- **Long lifetime and excellent reproducibility**

Quick, Direct Scale-up from Analytical Methods

Scaling up is easier when using an HPLC media that provides near identical performance across all particle sizes and with increases in column diameter. Any mobile phase conditions developed on a Luna™ or Jupiter™ analytical column can be easily transferred to a 10µm or 15µm preparative column with equivalent resolution, selectivity, and proportional mass loading. Lux™ analytical columns also easily scale to 20µm preparative columns.

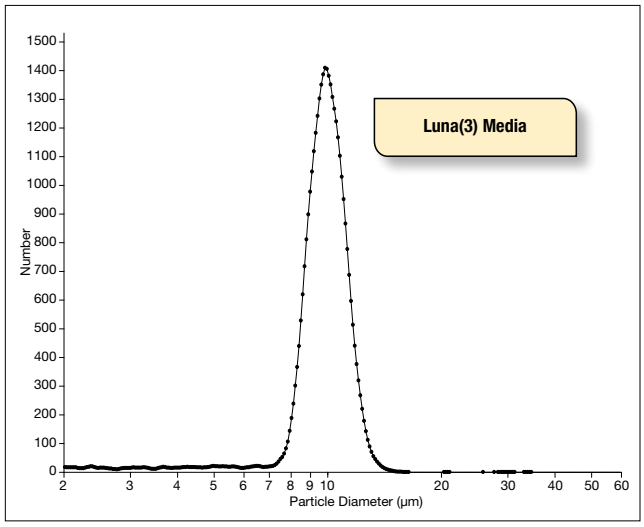
Mechanically Strong Media

- Media free of crushed or cracked silica and silica fines
- Backpressures that remain stable
- Consistent particle size distribution so performance is maintained
- Longer column lifetimes (frits stay unclogged)

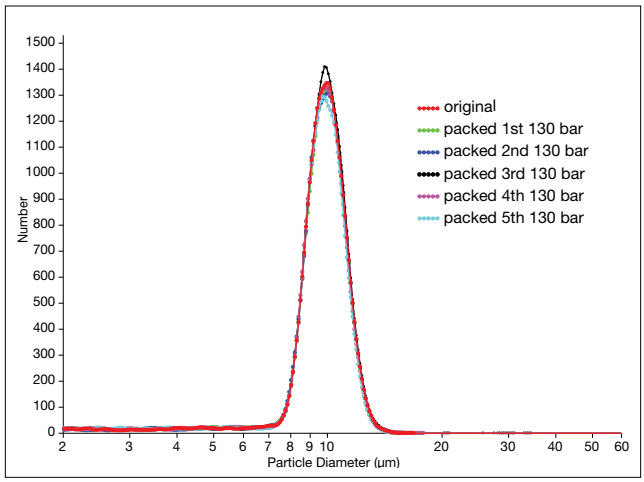
Withstand Multiple Repacking in Dynamic Axial Compression (DAC) Systems

Dynamic Axial Compression (DAC) systems apply high mechanical stress on the packing media. This, along with high flow rates and backpressures can crack or sheer low mechanical strength silica particles, creating silica fines, which will rapidly degrade column efficiency and clog frits. Luna, Jupiter, and Lux media provide exceptional strength over multiple DAC packings without sacrificing performance as well as easily withstanding high mechanical stress.

Lower Backpressure with Narrower Particle Size Distribution



Mechanical Stability Demonstrated by Repeated Packing



Overlay of particle size distributions of Luna C18(3) repeatedly packed at 130 bars in a 5 cm ID DAC system

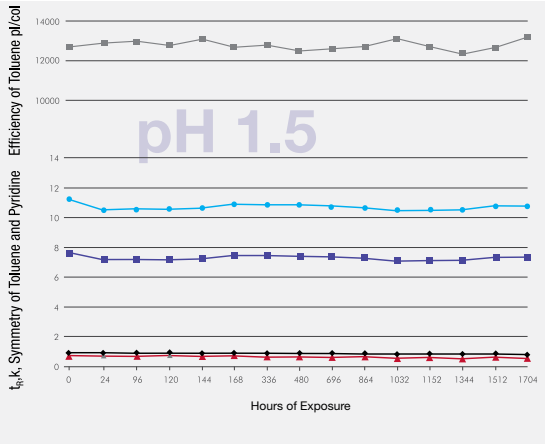
Chemically Stable Media

Chemical stability at pH levels outside the normal constraints of 2-7 is a critical factor in today's process environments for several reasons:

- **Allows greater loading capacity**
- **Allows optimization of sample solubility**
- **pH adjustment to optimize recovery of API**
- **Clean-in-Place (CIP) processes by means of a caustic wash**

Excellent Performance at Low pH

Luna™ 5 µm C18(2) 100 Å, pH Stable (1.5-10)

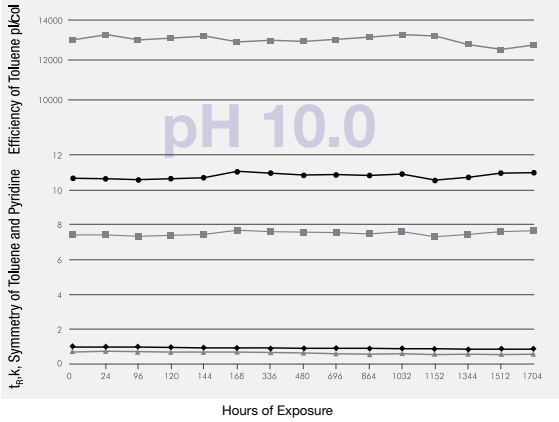


Test Conditions: Column stability tested under highly acidic conditions.
Continuous flush in 0.1 % TFA (pH 1.5) in Water/Acetonitrile, 50:50.

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

Extended Media Lifetime even Under Caustic Washes

Luna 5 µm C18(2) 100 Å, pH Stable (1.5-10)



Test Conditions: Column stability tested under highly basic conditions
Continuous flush in 20 mM 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

Controlled Manufacturing Process

We engineer and manufacture all of our media with your needs as a guideline. Our state-of-the-art facility gives us the capability to provide some of the most consistent media available on the market. With very high loadability, excellent mechanical strength, extended chemical stability, and batch-to-batch reproducibility, it is no wonder why more and more people turn to Phenomenex media every day.

Certificates

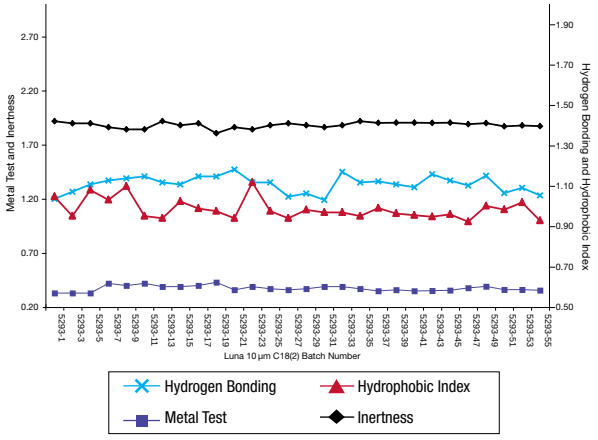
The development, production, and marketing of Phenomenex Bulk Media follow ISO 9001 guidelines.

Product Quality

BSE/TSE Certificate

Batch-to-Batch Reproducibility

With over 20 years of proven reproducibility, you can be confident in your choice to develop methods on Luna. The following graph shows consistency in both inertness and hydrophobicity across 40 batches of Luna 10 µm C18(2).



Exceptional Chemical Stability for Low Leachates

The dense bonded phase density of Luna and Synergi™ provide revolutionary pH 1.5–10 stability†, with Gemini offering an extended pH range of 1.0-12.0. The wide pH range of these media provides flexibility in method development allowing for improvements in resolution and greater mass loading of basic compounds (pK_a > 9) at high pH.

†Please see Sorbent Characteristics chart pp. 433-434 for exact pH limits of each phase.

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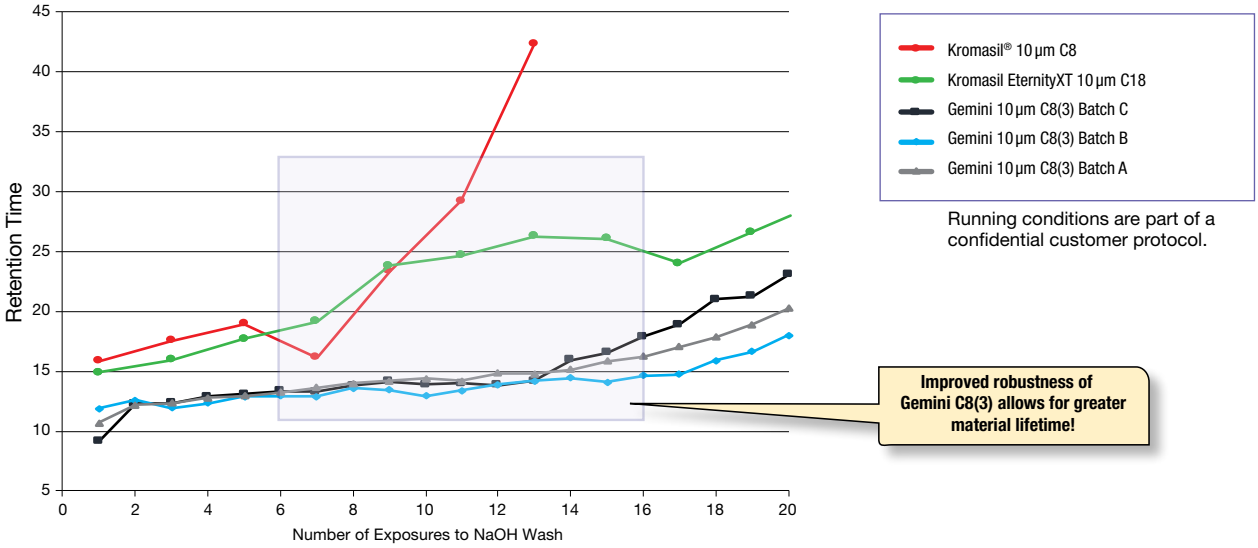
Gemini C8(3)

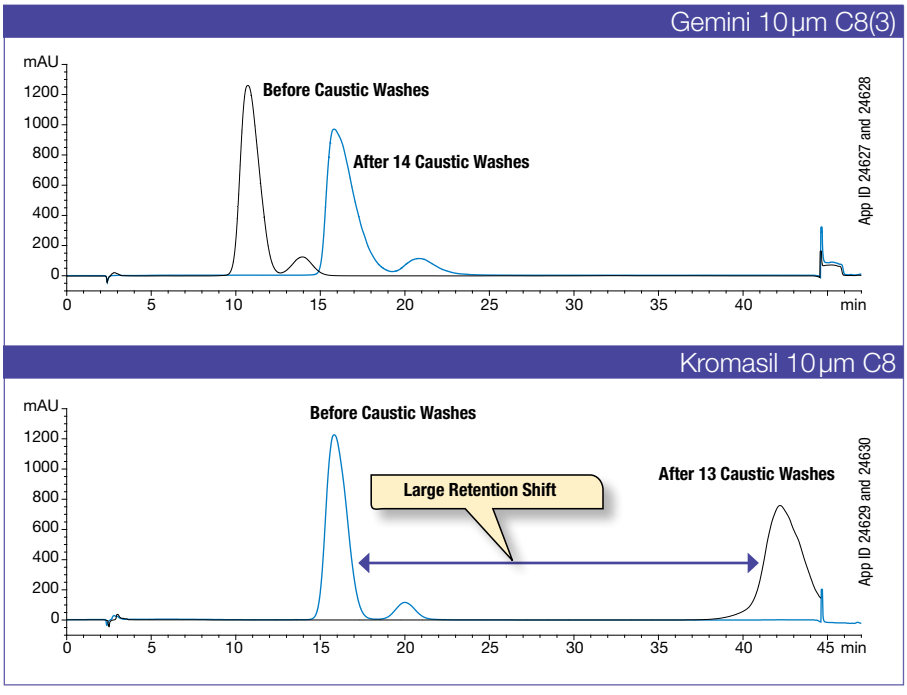
The Material Developed for High pH Insulin Purification

Many products can separate human insulin and its degradant, while few can withstand high pH caustic washes for aggregate removal. Now, there is a clear media choice. Gemini™ C8(3) provides the needed separation, the needed low/high pH robustness, and the overall consistency in terms of efficiency and retention cycle to cycle to cycle. You don't have to choose between consistent performance or robustness; Gemini C8(3) was developed to give you the best of both worlds.

Insulin Retention vs. Exposures to NaOH Wash



Insulin Retention Comparison



Comparative separations may not be representative of all applications.

PREP LC Columns and Bulk HPLC Media

- **Maintain or increase yield with less media**
- **Dramatically reduce cost of PREP/Process-LC purifications**
- **Withstand multiple axial compression packings with high mechanical strength media**

Maintain or Increase Yield with Less Media

Higher silica surface area equals greater mass loading. With 400 m^2/g surface area, Luna has one of the highest surface areas among popular PREP LC media. Even greater mass loading is possible with the 475 m^2/g surface area of Synergi™ 80 Å media. Both Synergi and Luna™ are unique in that they offer high mass loading with low-density, rugged silica; requiring less media to pack a given volume. Thus while less media is needed to pack a given dimension compared to other common prep sorbents, mass loading remains high with peak resolution and purity maintained. Especially for early eluting target compounds, Luna has been shown to provide greater mass loading compared to some common prep media. This allows for increased loading on less media, and more yield per run.

Choose the Correct Media for your Application

Bonded Phase	Sorbent	Pore Size (Å)	Surface Area (m^2/g)	pH Stability	Particle Size (µm) ("bulk" indicates bulk media available)	Density	Applications
Achiral Media							
Si (Silica)	Luna Silica(3)	100	400	2.0 – 7.5	*10-PREP* (bulk)	0.47	Small Organic Molecules, Steroids, Nutraceuticals, Fat Soluble Vitamins, Tocopherols
	Luna Silica(2)	100	400	2.0 – 7.5	10 µm (bulk) 10-*PREP* (bulk) 15 µm (bulk) 20 µm (bulk)	0.45	Small Organic Molecules, Steroids, Nutraceuticals, Fat Soluble Vitamins, Tocopherols
C18	Luna C18(3)	100	400	1.5 – 10	10-*PREP* (bulk)	0.60	Pharmaceuticals, Peptides, Nutraceuticals, Agrochemical, Vitamins, Basic Compounds, General Reversed Phase Applications
	Luna C18(2)	100	400	1.5 – 10	10 µm (bulk) 10-*PREP* (bulk) 15 µm (bulk)	0.58	Pharmaceuticals, Peptides, Nutraceuticals, Agrochemical, Vitamins, Basic Compounds, General Reversed Phase Applications
	Synergi Hydro-RP *C18 with Polar Endcapping*	80	475	1.5 – 7.5	10 µm (bulk)	0.55	Very Polar Compounds, Pharmaceuticals, Vitamins, Antibiotics
	Jupiter™ 300 C18	300	170	1.5 – 10	10 µm (bulk), 15 µm (bulk)	0.44	Hydrophilic Proteins, Oligonucleotides (>30 mer)
C12	Synergi Max-RP	80	475	1.5 – 10	10 µm (bulk)	0.55	Pharmaceuticals, Nutraceuticals, Agrochemical, Vitamins, Amino Acids, Basic Compounds, General Reversed Phase Applications
C8	Luna C8(3)	100	400	1.5 – 10	10-*PREP* (bulk)	0.58	Pharmaceuticals, Peptides, Estrogens, Basic Compounds, General Reversed Phase Applications
	Luna C8(2)	100	400	1.5 – 10	10 µm (bulk) 10-*PREP* (bulk) 15 µm (bulk)	0.56	Pharmaceuticals, Peptides, Estrogens, Basic Compounds, General Reversed Phase Applications
	Gemini™ C8(3)	100	400	1.0 – 12.0	10 µm (bulk)	0.60	Small Molecules, Peptides, Proteins, Oligonucleotides
C4	Luna C4(2)	100	400	1.5 – 10	10-*PREP* (bulk)	0.54	Hydrophobic Compounds, Peptides, Small Proteins
	Jupiter 300 C4	300	170	1.5 – 10	10 µm (bulk), 15 µm (bulk)	0.38	Hydrophobic Proteins
Phenyl	Luna Phenyl-Hexyl	100	440	1.5 – 10	10 µm (bulk) 10-*PREP* (bulk) 15 µm (bulk)	0.58	Polar and Aromatic Compounds, Peptides, Antibiotics, Lipids, Phenols, Sweeteners
	Luna Polar-RP	100	400	1.5 – 7.0	10-*PREP* (bulk)	0.55	Polar and Aromatic Compounds, Hydrophilic Peptides, Antibiotics, Phenols, Sweeteners
	Synergi Polar-RP *(Ether-Linked Phenyl)*	80	475	1.5 – 7.0	10 µm (bulk)	0.55	Polar and Aromatic Compounds, Hydrophilic Peptides, Antibiotics, Phenols, Sweeteners
CN (Cyano)	Luna CN	100	400	1.5 – 7.0	10 µm (bulk)	0.55	Polar Compounds, Pharmaceuticals, Hydrophilic Peptides, Esters, Steroids, Phthalates, Compounds with COOH, CO, NH_2, NHR_2 or NR_2 groups
NH_2 (Amino)	Luna NH_2	100	400	1.5 – 11	10 µm (bulk)	0.57	Sugars, Sugar Alcohols, Anionic Compounds, Steroids, Vitamins, Nucleosides, Oligonucleotides
Chiral Media							
cellulose tris(3,5-dimethylphenyl carbamate)	Lux™ Cellulose-1	1000	—	2 – 9	10 µm	0.62	Enhanced enantioselectivity for aromatic, conjugated and other chiral compounds
cellulose tris(3-chloro-4-methyl phenylcarbamate)	Lux Cellulose-2	1000	—	2 – 9	10 µm	0.62	Enhanced enantioselectivity for aromatic, conjugated and other chiral compounds
cellulose tris(4-methyl-benzoate)	Lux Cellulose-3	1000	—	2 – 9	10 µm	0.62	Enhanced enantioselectivity for aromatic, conjugated and other chiral compounds
cellulose tris(4-chloro-3-methyl phenylcarbamate)	Lux Cellulose-4	1000	—	2 – 9	10 µm	0.62	Enhanced enantioselectivity for aromatic, conjugated and other chiral compounds

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Scout Columns

Achiral Columns

Ordering Information

Luna™ (100 Å)

Phases	250 x 4.6 mm	250 x 10 mm
10 µm-*PREP*		
C18(3)	00G-4616-E0	00G-4616-N0
C18(2)	00G-4324-E0	—
C8(3)	00G-4623-E0	00G-4623-N0
C8(2)	00G-4323-E0	00G-4323-N0
C4(2)	00G-4460-E0	00G-4460-N0
Phenyl-Hexyl	00G-4325-E0	00G-4325-N0
Polar-RP	00G-4757-E0	00G-4757-N0
Silica(3)	00G-4617-E0	00G-4617-N0
Silica(2)	00G-4322-E0	00G-4322-N0
10 µm		
CN	00G-4300-E0	—
NH_2	00G-4379-E0	00G-4379-N0
15 µm		—
C18(2)	00G-4273-E0	00G-4273-N0
C8(2)	00G-4272-E0	00G-4272-N0
Phenyl-Hexyl	00G-4286-E0	00G-4286-N0
Silica(2)	00G-4271-E0	—
20 µm		—
Silica(2)	00G-4437-E0	—

Jupiter™ (300 Å)

Phases	250 x 4.6 mm	250 x 10 mm
15 µm		
300 Å C18	00G-4057-E0	00G-4057-N0
300 Å C4	00G-4169-E0	00G-4169-N0

Gemini™ (110 Å)

Phases	250 x 4.6 mm	250 x 10 mm
10 µm		
C8(3)	00G-4763-E0	00G-4763-N0

Chiral Columns

Ordering Information

Lux™ (1000 Å)

Phases	250 x 4.6 mm	250 x 10 mm
10 µm		
Cellulose-1	00G-4501-E0	00G-4501-N0
Cellulose-2	00G-4502-E0	00G-4502-N0
Cellulose-3	00G-4624-E0	—
Cellulose-4	00G-4625-E0	—
20 µm		
Cellulose-1	00G-4473-E0	00G-4473-N0
Cellulose-2	00G-4464-E0	00G-4464-N0
Cellulose-3	00G-4504-E0	00G-4504-N0
Cellulose-4	00G-4503-E0	00G-4503-N0

Additional scout columns available. Contact us for 3 µm, 4 µm, 5 µm, and 10 µm media scout columns.

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Bulk HPLC Media

Achiral Media

Ordering Information

Luna™ (100 Å)

Phases	100 g	1 kg	5 kg	10 kg
10 µm-*PREP*				
C18(3)	04G-4616	04K-4616	04L-4616	04M-4616
C18(2)	04G-4324	04K-4324	04L-4324	04M-4324
C8(3)	04G-4623	04K-4623	04L-4623	04M-4623
C8(2)	04G-4323	04K-4323	04L-4323	04M-4323
C4(2)	04G-4460	04K-4460	04L-4460	04M-4460
Phenyl-Hexyl	04G-4325	04K-4325	04L-4325	04M-4325
Polar-RP	04G-4757	04K-4757	04L-4757	04M-4757
Silica(3)	04G-4617	04K-4617	04L-4617	04M-4617
Silica(2)	04G-4322	04K-4322	04L-4322	04M-4322
10 µm				
CN	04G-4300	04K-4300	04L-4300	—
NH_2	04G-4379	04K-4379	—	—
15 µm				
C18(2)	04G-4273	04K-4273	04L-4273	04M-4273
C8(2)	04G-4272	04K-4272	04L-4272	04M-4272
Phenyl-Hexyl	04G-4286	04K-4286	04L-4286	04M-4286
Silica(2)	04G-4271	04K-4271	04L-4271	04M-4271
20 µm				
Silica(2)	04G-4437	04K-4437	—	—

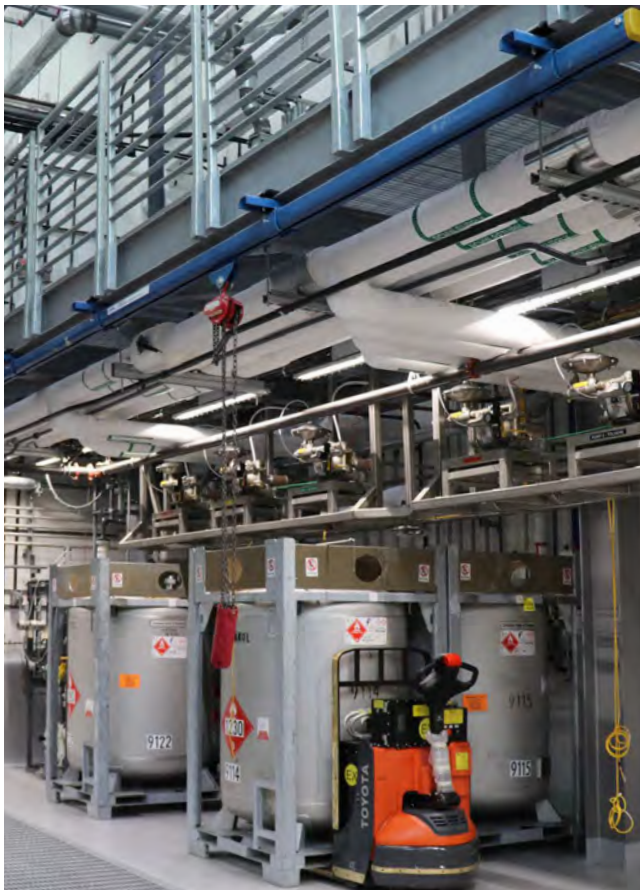
Jupiter™ (300 Å)

Phases	100 g	1 kg	5 kg	10 kg
15 µm				
300 Å C18	04G-4057	04K-4057	04L-4057	04M-4057
300 Å C4	04G-4169	04K-4169	04L-4169	04M-4169

Gemini™ (110 Å)

Phases	100 g	1 kg	5 kg	10 kg
10 µm				
C8(3)	04G-4763	04K-4763	04L-4763	04M-4763

For Sepra bulk sorbents, see p. 401



Chiral Media

Ordering Information

Lux™ (1000 Å)

Phases	10 g	100 g	1 kg
10 µm			
Cellulose-1	04D-4501	04G-4501	04K-4501
Cellulose-2	04D-4502	04G-4502	04K-4502
Cellulose-3	04D-4624	04G-4624	04K-4624
Cellulose-4	04D-4625	04G-4625	04K-4625

Contact your Phenomenex technical consultant or local distributor for additional bulk packings and quantities not listed.

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Sepra™ Bulk Sorbents

- **Provides reproducible recoveries from capture to purification**
- **Removes contaminants and eliminates matrix effects**
- **Offers controlled selectivity for target analytes**
- **Results in high-throughput sample purification**

Phenomenex offers a wide mix of bulk media including an array of large particle media for today's chemists who need effective capture and concentrating resins.

Sepra media offers purification of proteins, peptides, nucleic acids, antibodies, tryptic digests, nucleotides, viruses, and small molecular weight pharmaceuticals in a low pressure environment. It is an excellent economical alternative to high pressure RPC while still offering high resolution and loading capacity.

Capture and Concentrate Resins

Media Base Material	Brand	Phase	Particle Size (µm)	Pore Size (Å)	Surface Area (m^2/g)	Carbon Load (%)	pH Stability	Ordering Information Sepra Bulk Sorbents Phase	100 g	1 kg
Silica	**Sepra**									
		C18-E	50	65	500	17	2-9	C18-E	04G-4348	04K-4348
		C18-T	50	135	300	15	2-9	C18-T	04G-4405	04K-4405
		C8	50	65	500	10	2-9	C8	04G-4406	—
		Phenyl	50	65	500	10	2-9	Phenyl	04G-4407	—
		CN	50	65	500	10	2-9	CN	04G-4409	—
		NH_2	50	65	500	5	2-9	NH_2	04G-4408	04K-4408
		Florisil®	170 (60/100 mesh)	80	300	0	2-9	Florisil®	04G-4411	04K-4411
		SCX	50	65	500	9	2-9	SCX	04G-4413	04K-4413
		SAX	50	65	500	6	2-9	SAX	04G-4414	04K-4414
		WCX	55	70	500	8	2-9	WCX	04G-S027	—
		Silica	50	65	500	0	2-9	Silica	04G-4410	04K-4410
		EPH	200	70	Proprietary	0	2-7.5	EPH	04G-4508	—
Small Pore Polymer	**Sepra ZT**									
		ZT	30	85	800	–	1-14	ZT	04G-4426	—
		ZT-SCX	30	85	800	–	1-14	ZT-SCX	04G-4466	—
		ZT-WCX	30	85	800	–	1-14	ZT-WCX	04G-4478	—
		ZT-SAX	30	85	800	–	1-14	ZT-SAX	04G-4485	—
		ZT-WAX	30	85	800	–	1-14	ZT-WAX	04G-4463	—
Large Pore Polymer	**Sepra ZTL**									
		ZTL	115	330	500	–	1-14	ZTL	04G-4470	—
		ZTL-SCX	115	330	500	–	1-14	ZTL-SCX	04G-4467	04K-4467
		ZTL-WCX	115	330	500	–	1-14	ZTL-WCX	Inquire	Inquire
		ZTL-SAX	115	330	500	–	1-14	ZTL-SAX	Inquire	Inquire
		ZTL-WAX	115	330	500	–	1-14	ZTL-WAX	04G-4494	—
Styrenedivinylbenzene Polymer	**Sepra SDB-L**									
		SDB-L	95	255	500	–	1-14	SDB-L	04G-4412	04K-4412

Interested in MSPD for your analysis? Please contact us for technique and accessory information.

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