Luknova

Flash Chromatography and Sample Preparation

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Innovative Flash Columns: Silica Gel

SuperSep™ Flash Columns (Silica)

Luknova SuperSep™ normal phase silica gel columns are designed for flash purification of organic compounds with sample loading up to 10% of packed mass. Both standard and High Performance (HP) columns are disposable and reusable. High purity silica gel with narrow particle size distribution and narrow pH range and special mechanical packing technology enable significant advantages over leading competitors in purification efficiency, resolution, and column reproducibility. The columns are compatible with all purification systems.

SuperSep™ standard silica

Ultra pure silica gel, 40-60 µm (averaged 50 µm)

Pore size 60 Å, pore volume 0.75 ml/g

Surface area 500 m^2/g, pH range 6.8-7.2

Single use and reusable

SuperSep™ HP, High Performance

Ultra pure silica gel, 20-30 µm

Higher surface area

Higher resolution and loading capacity

Single use and reusable

Features and advantages

Ultra pure silica gel with narrow particle size distribution.

Neutral silica gel enables the compounds remain intact on columns.

Innovative and patented column design allows easy sample recovery and sorbent reloading and dry loading.

Advanced mechanical packing brings uniform column packing density and guarantees column performance consistency.

Order Information

Size	P/N	Qty/PK	CV (ml)	Flow Rate (ml/min)	Sample Loading
Normal phase silica flash columns (40-60 µm)					
4g	FC003004	40	5	18 ± 5	4mg — 0.4g
	FC003004-0	480			
12g	FC003012	30	17	30 ± 5	12mg — 1.2g
	FC003012-0	360			
25g	FC003025	25	34	35 ± 10	25mg — 2.5g
	FC003025-0	300			
40g	FC003040	20	57	40 ± 15	40mg — 4.0g
	FC003040-0	240			
80g	FC003080	10	120	60 ± 20	80mg — 8.0g
	FC003080-0	80			
120g	FC003120	8	190	85 ± 20	0.12g — 12g
	FC003120-0	64			
240g	FC003240	4	330	60 — 170 150 ± 20 for HP[a]	0.24g — 24g
	FC003240-0	32			
330g	FC003330	4	450	80 — 220 200 ± 20 for HP[a]	0.33g — 33g
	FC003330-0	32			
750g	FC003750	4	1500	200 — 300	2.5g — 75g
1500g	FC0031500	3	2900	300 — 450	5.0g — 150g
Normal phase high performance silica (20-30 µm, high surface area)					
4g	FCHP3004	14	5	19 ± 5	4mg — 0.4g
12g	FCHP3012	14	17	30 ± 5	12mg — 1.2g
25g	FCHP3025	10	34	35 ± 10	25mg — 2.5g
40g	FCHP3040	10	57	40 ± 15	40mg — 4.0g
80g	FCHP3080	6	120	60 ± 20	80mg — 8.0g
120g	FCHP3120	6	190	85 ± 20	0.12g — 12g
240g	FCHP3240	4	330	60 — 150	0.24g — 24g
330g	FCHP3330	3	450	100 — 200	0.33g — 33g

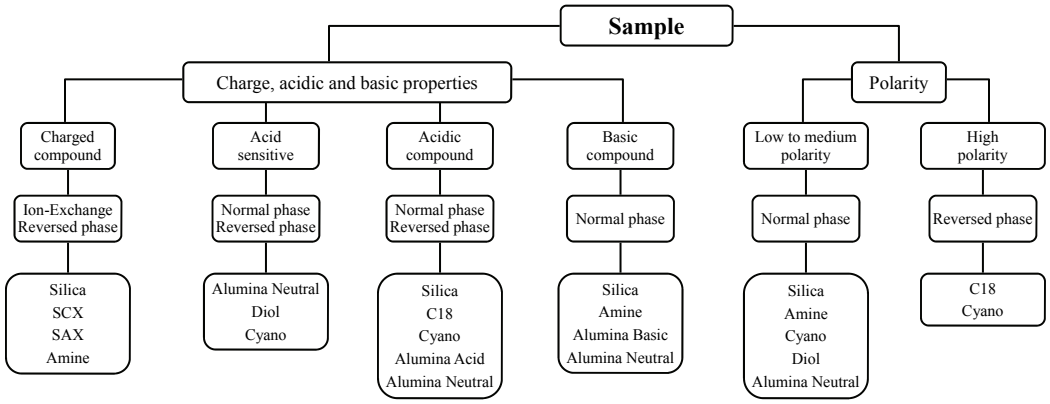
a – HP, high pressure system (>100 psia).

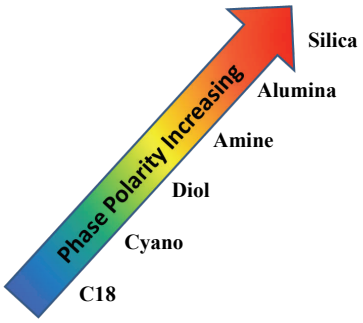
Innovative Flash Columns: Specialty Phases

SuperSep™ Flash Columns (Functionalized Silica and Alumina)

Luknova packs SuperSep™ C18, Cyano, Diol, Amine, SAX, and SCX functionalized-silica columns and high purity alumina columns for reversed-phase and normal phase separation based on polarity, charge, and acid and basic properties. Functionalized silica columns can be used up to more than 20 times.

Flash Column Phase Selection Guide





Sorbent	Chemistry	Loading
SuperBond C18	$Si-(CH_2)_{17}-CH_3$	17%
SuperBond Amine	$Si-(CH_2)_3-NH_2$	6.7%
SuperBond Cyano	$Si-(CH_2)_3-CN$	7.0%
SuperBond Diol	$Si-(CH_2)_3-O-CH_2CH(OH)-CH_2OH$	8.0%
SuperBond SAX	$Si-(CH_2)_3-N^+(CH_3)_3Cl^-$	8.4%
SuperBond SCX	$Si-(CH_2)_2-Ph-SO_3H$	11%
Alumina Acid	Al_2O_3, pH=4.5	NA
Alumina Neutral	Al_2O_3, pH=7.0	NA
Alumina Basic	Al_2O_3, pH=9.5	NA

Order Information

Sorbent wt	5.5g	16.5g	34g	50g	100g	150g	300g	420g
Volume Equivalent to silica in wt	4g	12g	25g	40g	80g	120g	240g	330g
Qty	2/PK	1/PK	1/PK	1/PK	1/PK	1/PK	1/PK	1/PK
SuperBond C18	FR004-1	FR012-1	FR025-1	FR040-1	FR080-1	FR120-1	FR240-1	FR330-1
SuperBond Amine	FAM004-1	FAM012-1	FAM025-1	FAM040-1	FAM080-1	FAM120-1	FAM240-1	FAM330-1
SuperBond Cyano	FCY004-1	FCY012-1	FCY025-1	FAY040-1	FCY080-1	FCY120-1	FCY240-1	FCY330-1
SuperBond Diol	FDL004-1	FDL012-1	FDL025-1	FAY040-1	FDL080-1	FDL120-1	FDL240-1	FDL330-1
SuperBond SAX	FSA004-1	FSA012-1	FSA025-1	FAY040-1	FSA080-1	FSA120-1	FSA240-1	FSA330-1
SuperBond SCX	FSC004-1	FSC012-1	FSC025-1	FAY040-1	FSC080-1	FSC120-1	FSC240-1	FSC330-1
Flow rate, mL/min	18±5	30±5	35±10	40±10	60±15	85±15	60 — 170	80 — 220

Alumina wt	8g	24g	48g	80	160g	240g	480g	660g
Volume Equivalent to silica in wt	4g	12g	25g	40g	80g	120g	240g	330g
Qty	20/PK	20/PK	15/PK	15/PK	12/PK	10/PK	6/PK	4/PK
Alumina Acid (AA)	FAA004-1	FAA012-1	FAA025-1	FAA040-1	FAA080-1	FAA120-1	FAA240-1	FAA330-1
Alumina Neutral (AN)	FAN004-1	FAN012-1	FAN025-1	FAN040-1	FAN080-1	FAN120-1	FAN240-1	FAN330-1
Alumina Basic (AB)	FAB004-1	FAB012-1	FAB025-1	FAB040-1	FAB080-1	FAB120-1	FAB240-1	FAB330-1
Flow rate, mL/min	18±5	30±5	35±10	40±10	60±15	85±15	60 — 170	80 — 220

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FlashMaster Columns and Solid Load Cartridges

SuperSep™ FLM (FlashMaster™ compatible flash columns)

Luknova SuperSep™ FLM, FlashMaster™ compatible flash columns are packed with Silica, Alumina (neutral, acid, basic), and C18, Cyano, Diol, Amine, SAX, and SCX functionalized-silica media. These columns are designed to be compatible with Biotage™ FlashMaster™ flash purification instruments.

Order Information

Silica wt	2g	5g	10g	15g	20g	25g	50g	70g
Entire Tube Volume	15ml	25ml	70ml	70ml	70ml	150ml	150ml	150ml
Qty	20/PK	20/PK	16/PK	16/PK	16/PK	8/PK	8/PK	8/PK
Silica	FLMSC2	FLMSC5	FLMSC10	FLMSC15	FLMSC20	FLMSC25	FLMSC50	FLMSC70
Phase	**Volume Equivalent to Silica in Weight**							
	2g	5g	10g	15g	20g	25g	50g	70g
Alumina Neutral	FLMAN2	FLMAN5	FLMAN10	FLMAN15	FLMAN20	FLMAN25	FLMAN50	FLMAN70
Alumina Acid	FLMAC2	FLMAC5	FLMAC10	FLMAC15	FLMAC20	FLMAC25	FLMAC50	FLMAC70
Alumina Basic	FLMAB2	FLMAB5	FLMAB10	FLMAB15	FLMAB20	FLMAB25	FLMAB50	FLMAB70
SuperBond C18	FLMRP2	FLMRP5	FLMRP10	FLMRP15	FLMRP20	FLMRP25	FLMRP50	FLMRP70
SuperBond Amine	FLMAM2	FLMAM5	FLMAM10	FLMAM15	FLMAM20	FLMAM25	FLMAM50	FLMAM70
SuperBond Cyano	FLMCY2	FLMCY5	FLMCY10	FLMCY15	FLMCY20	FLMCY25	FLMCY50	FLMCY70
SuperBond Diol	FLMDL2	FLMDL5	FLMDL10	FLMDL15	FLMDL20	FLMDL25	FLMDL50	FLMDL70
SuperBond SAX	FLMSA2	FLMSA5	FLMSA10	FLMSA15	FLMSA20	FLMSA25	FLMSA50	FLMSA70
SuperBond SCX	FLMSC2	FLMSC5	FLMSC10	FLMSC15	FLMSC20	FLMSC25	FLMSC50	FLMSC70

SuperSep Solid Load Cartridges (compatible with ISCO)

Luknova® SuperSep Solid Load Cartridges are used to improve the separation efficiency and compound purity for low-solubility sample purification by eliminating the impurities and minimizing the byproducts. For low-solubility sample, loading the empty cartridges with a slurry mixture of the dissolved low-solubility sample and supporting media. Prior to the cartridge loading, the vacuum vaporization of the solvent typically improves the purification efficiency. The dissolved sample can be loaded directly onto the top of the prepacked load cartridges packed with Silica, Alumina, C18, Celite, Cyano, Diol, Amine, SAX, and SCX.

Empty solid load cartridges

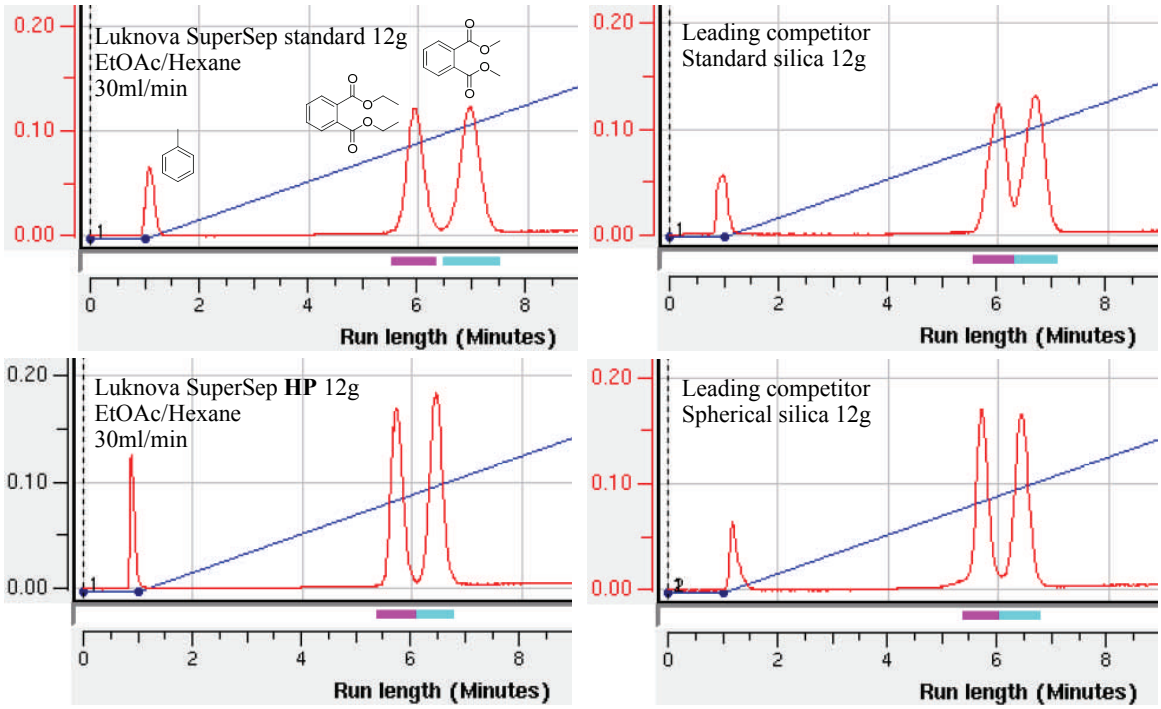
Size	Description	Qty	P/N
5g/15ml	5g/15ml SuperSep solid load cartridges, empty.	80	SPE05-80
		960	SPE05-960
25g/75ml	25g/75ml SuperSep solid load cartridges, empty.	20	SPE25-20
		240	SPE25-240
65g/150ml	65g/150ml SuperSep solid load cartridges, empty.	12	SPE65-12
260g/700ml	260g/750ml SuperSep solid load cartridges, empty.	6	SPE260-6

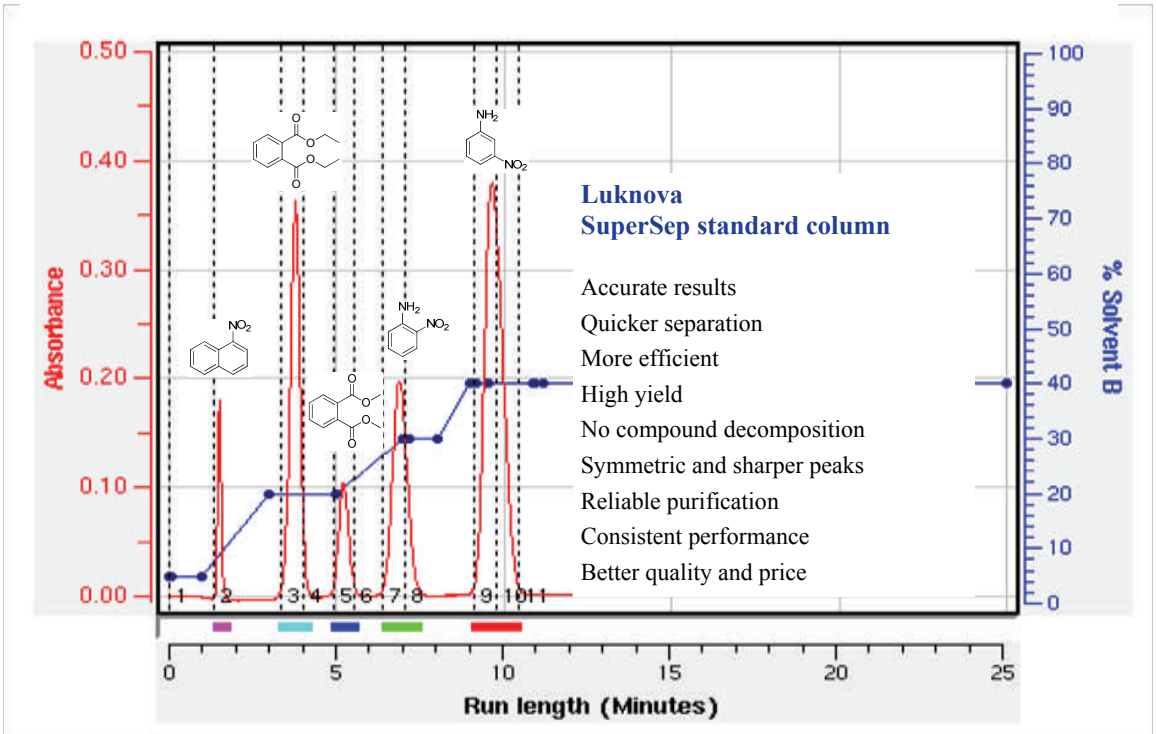
Prepacked solid load cartridges

Packed Mass/ Tube Volume	Silica Gel		Celite		C18	
	Qty	P/N	Qty	P/N	Qty	P/N
2.5g/15ml	40	SPE05A2	40	SPE05CE2	40	SPE05R2
2.5g/15ml	960	SPE05A2-0	960	SPE05CE2-0	960	SPE05R2-0
5g/15ml	40	SPE05A5	40	SPE05CE5	40	SPE05R5
5g/15ml	960	SPE05A5-0	960	SPE05CE5-0	960	SPE05R5-0
12g/75ml	20	SPE25A12	20	SPE25CE12	20	SPE25R12
12g/75ml	240	SPE25A12-0	240	SPE25CE12-0	240	SPE25R12-0
25g/75ml	20	SPE25A25	20	SPE25CE25	20	SPE25R25
25g/75ml	240	SPE25A25-0	240	SPE25CE25-0	240	SPE25R25-0
32g/150ml	12	SPE65A32	12	SPE65CE32	12	SPE65R32
65g/150ml	12	SPE65A65	12	SPE65CE65	12	SPE65R65
125g/750ml	4	SPE260A125	4	SPE260CE125	4	SPE260R125
260g/750ml	4	SPE260A260	4	SPE260CE260	4	SPE260R260

Innovative Flash Columns: Performance Comparison

Performance Comparison





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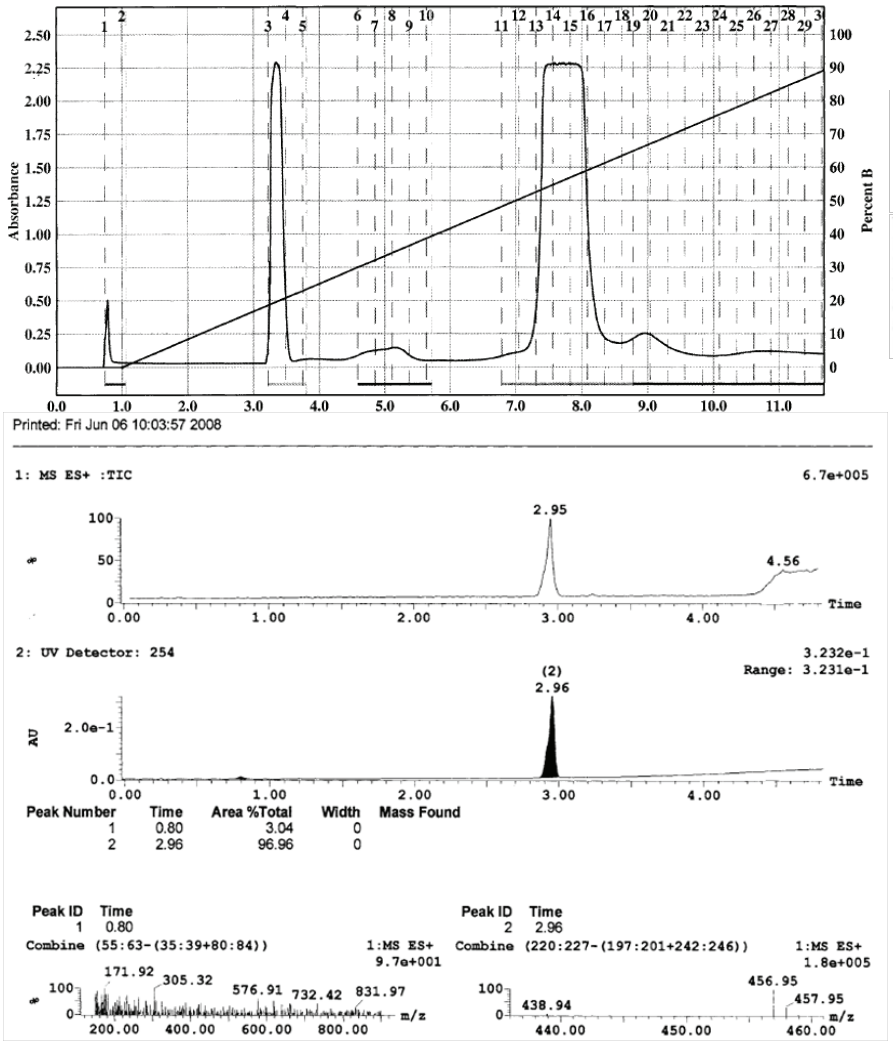
Innovative Flash Columns: Application Examples

Product Purity, 96.96% Determined with LC-MS by a Leading Client



Detection Wavelength (red): 254 nm
Flow Rate: 85 ml/min
Equilibration Volume: 3.0 CV
Initial Waste: 0.0 CV
Air Purge: 1.5 min
Run Length 11.7 CV (26.4 Min)

Non-Peak Tube Volume: Max.
Loading Type: Liquid
Peak Detection Width: 4 min
Peak Detection Threshold: 0.20 AU
Solvent A: A1 hexane
Solvent B: B1 ethyl acetate
Run Notes:

Sample Information:

Undisclosed real sample. A mixture of tertiary alcohols from reactions of boronic acid coupling to an aryl bromide and a second reaction of sonogashira reaction of an acetylene with an aryl bromide. All the products and impurities from the reactions contain alcohols.

Fraction Purity:

A 96.96% reported purity of the fraction based on Mass Spectroscopy analysis.

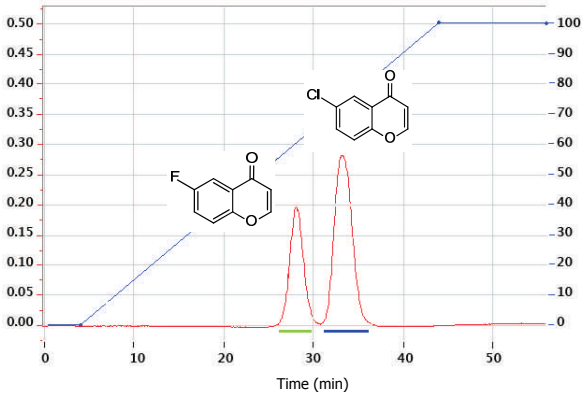
Column: Luknova SuperSep standard 120gram silica gel flash column.

SuperSep C18 Columns Experimental Tips

System Preparation: C18 columns operate under reversed phase conditions (i.e., 100% Water → 100% Acetonitrile). When ready to switch from normal phase to reversed phase purification, make sure (i) air purge solvent A and B lines, (ii) flush solvent A and B lines with high purity acetonitrile, methanol, or ethanol, and (iii) flush solvent A line with aqueous solvent thoroughly.

C18 Column Preconditioning: Use six to seven column volumes of 1/1 water/acetonitrile (or water/methanol) mixture to flush the C18 column prior to first and immediate use. In an alternative way, pre-equilibrate with twice CV of 100% acetonitrile and store for 1hr prior to use.

End of the Run Care and Storage: At the end of the separation run, wash the column with four column volumes 100% acetonitrile or organic solvent B. It is recommended that only after the wash with 100% organic solvent, the purification can be returned to the condition of the start of the run and start the next run. At the end of the run, flush the column with four column volumes of 80% organic solvent + 20% water and capped wet to store for future use.



Luknova SuperSep™ C18 Column, 5.5g. Solvents: Water (A) and Methanol (B)

Empty Innovative Flash Cartridges and Adaptors

SuperSep™ Empty Flash Cartridge Housing

Luknova provides proprietary empty flash cartridges to meet client specific needs. A variety of process and approaches can be employed to achieve the leak-free column assembly, such as clamping the filled column securely to a ring stand when mount the sealing insert, align the perforated cap, and tighten the perforated cap onto the column body container. Luknova utilizes custom-made instrument to pack tight and leak-free flash columns. We also provide custom packing services with client media.

Order Information of Empty Flash Cartridge Housing

Size	P/N	Qty/ PK	CV (ml)
4g	FC003004-1	40	5
	FC003004-2	480	
12g	FC003012-1	30	17
	FC003012-2	360	
25g	FC003025-1	25	34
	FC003025-2	300	
40g	FC003040-1	25	57
	FC003040-2	300	
80g	FC003080-1	10	120
	FC003080-2	80	

Size	P/N	Qty/PK	CV (ml)
120g	FC003120-1	8	190
	FC003120-2	64	
240g	FC003240-1	4	330
	FC003240-2	32	
330g	FC003330-1	4	450
	FC003330-2	32	
750g	FC003750-1	4	1500
1500g	FC0031500-1	3	2900

Note: Each column comes with a complete set of parts, including 1 cap, 1 sealing insert, 1 body, 1 top frit, and 1 inserted bottom frit.

Order Information of Frits for Empty Flash Cartridge Housing

Size	Description	Qty/PK	P/N
4g	Top and bottom frits (20µm) for 4g cartridge housing	100 Sets (100 Top & 100 Bottom)	FC003004-7
12g	Top and bottom frits (20µm) for 12g cartridge housing	100 Sets (100 Top & 100 Bottom)	FC003012-7
25g	Top and bottom frits (20µm) for 25g cartridge housing	100 Sets (100 Top & 100 Bottom)	FC003025-7
40g	Top and bottom frits (20µm) for 40g cartridge housing	100 Sets (100 Top & 100 Bottom)	FC003040-7
80g	Top and bottom frits 20µm) for 80g cartridge housing	100 Sets (100 Top & 100 Bottom)	FC003080-7
120g	Top and bottom frits (20µm) for 120g cartridge housing	100 Sets (100 Top & 100 Bottom)	FC003120-7
240g	Top and bottom frits (20µm) for 240g cartridge housing	50 Sets (50 Top & 50 Bottom)	FC003240-7
330g	Top and bottom frits (20µm) for 330g cartridge housing	50 Sets (50 Top & 50 Bottom)	FC003330-7
750g	Top and bottom frits (20µm) for 750g cartridge housing	50 Sets (50 Top & 50 Bottom)	FC003750-7
1500g	Top and bottom frits (20µm) for 1500g cartridge housing	50 Sets (50 Top & 50 Bottom)	FC0031500-7

Adaptor for Biotage System and Refurbished Purification Instruments

For Biotage Horizon, SP1, SP4, and FlashMaster systems, less expensive line connection as shown below (left side) is recommended by using Luer fittings and lines. The top connection line which comes from the pump outlet connects to the column inlet via a red-black adapter (P/N: LK1687). The column outlet is connected with adaptor bottom section (P/N: LK1689) to the UV detector. The Luer Lock Adapters are used to connect column either inlet, outlet, or both as shown below (right side) when needed, such as for stacking multiple columns and fitting into used or refurbished purification instruments.

P/N	Description	Qty
LK1687	Biotage system adaptor, top (inlet) section.	1/EA
LK1688	Biotage system adaptor, complete set.	1/EA
LK1689	Biotage system adaptor, bottom (outlet) section.	1/EA
LK1690	Luer Lock Adapter, Natural Polypropylene. Transparent.	50/PK
LK1691	Luer Lock Adapter, White Nylon.	50/PK

Filtration Products

Syringe Filters (with female luer lock inlet and male slip outlet)

Luknova supplies a variety of high quality syringe filters for sample preparation and solvent filtration to remove particles from a sample prior to chromatography, filtration of gases, and for the removal of bacteria from a sample, including:

- Nylon, PTFE , PVDF, PES, and MCE (mixed cellulose acetate and cellulose nitrate)
- Popular 13mm and 25mm diameters and 0.22µm and 0.45µm pore sizes
- Minimum extractables and maximum chemical compatibility
- High through put and flow rates, low hold-up volume, and minimum adsorption
- Consistent hydrophilic and hydrophobic membranes

Selection Guide

Step 1 Select Filter Diameter

Sample volume amount	≤ 10 mL	10-100mL
Syringe filter diameter	13mm	25mm

Step 2 Select Pore Size of the Filter Membrane

Sample physical nature and analytical methods	Filter membrane pore size
Viscous materials or samples that contain high concentrations of solid particulate matter and mobile phase filtration	0.45 µm
HPLC samples to be analyzed with column packed with > 3µm materials and GC, SFC, CE, GPC, and Flash samples	0.45 µm
HPLC samples to be analyzed with column packed with < 3µm materials and GC, SFC, CE, GPC, and Flash samples	0.22 µm
General samples that contain fine particulate matter prior to GC, SFC, CE, GPC, and Flash samples, and sterile-filtration	0.22 µm
Gas, liquid sample and solvent prior to GC, LC/MS and UHPLC, and other methods sensitive to particulate	0.22 µm

Step 3 Select Filter Membrane According to the Sample Characteristics and Filtering Objective

Membrane Type	Recommended Application
Nylon	Hydrophilic and commonly used for aqueous or mixed organic sample prep and HPLC, GC or dissolution sample analysis, such as bases, most HPLC solvents, alcohols, aromatic hydrocarbons, and THF. Not for strong acids, strong bases and high protein recovery. Excellent flow rates with most sample matrices and extremely low in extractables.
PTFE (Teflon®)	Hydrophobic and perfect for organic solvent-based, acidic or basic samples and all solvents, such as aggressive solvents, strong acids and bases, alcohols, and aromatics. Chemically resistant to all solvents and has an excellent thermal stability to high temperature fluids. It can be used with aqueous samples after pre-wetting with small amount of alcohol and then flushing with water.
PVDF	Hydrophilic and excellent for HPLC and GC sample prep/clean up and protein-based samples due to broad chemical compatibility, the nature of a low protein binder, and low UV adsorbing extractables. It can be used for alcohols, weak acids, proteins, peptides and other biomolecules for high protein recovery .
PES	Hydrophilic and excellent for tissue culture, media, and buffers due to very low protein and nucleic acid binding and excellent flow rates. The PES membrane shows better chemical resistance than cellulose acetate. It is widely used in clinical/toxicology, ion chromatography, ICP-MS, AAS, and capillary electrophoresis for strong bases, alcohols, proteins, peptides.
MCE	Hydrophilic and ideal for aqueous samples filtration that need higher flow rates and larger volume, including clarification or sterilization of aqueous solutions, particulate analysis and removal, air monitoring, microbial analysis, cytology, HPLC samples prep/clean up, virus concentration, biological assays, food microbiology (enumeration of E. coli in foods), bacteriological studies.

Solvents		Aqueous			
Non-Aqueous	Aqueous Mixtures	Hydrophilic			
Hydrophobic	Hydrophilic	Protein Analysis Biological Samples	Sterilization Microbial Analysis	HPLC and GC Biological Sample	Solvent Mixtures Sample Prep
↓	↓	↓	↓	↓	↓
PTFE	Nylon	PES	MCE	PVDF	Nylon

Filtration Products

Syringe Filters Material Characteristics

Membrane Name	Nylon	PTFE	PVDF	PES	MCE
Membrane Type	Hydrophilic	Hydrophobic	Hydrophilic	Hydrophilic	Hydrophilic
Effective Filtration Area	0.63 cm^2 (for 13mm) and 3.5 cm^2 (for 25mm)				
Hold-up Volume	<15µL (for 13mm) and <75µL (for 25mm)				
Housing	Polypropylene				
Inlet/Outlet Connections	Female luer lock inlet, Male slip luer outlet				
Maximum Operating Temperature	Maximum 100 °C (212 °F) at 2.1 bar (210 kPa, 30 psi)				
Sterilization	Provided non-sterile. If needed, autoclave at 121°C (250°F) at 1.0 bar (100 kPa, 15 psi) for a maximum of 15 min.				

Order Information

Membrane Type	Diameter	13 mm Diameter		25 mm Diameter	
	Pore Size	0.22µm	0.45µm	0.22µm	0.45µm
Nylon	100/PK	L10013022A	L10013045A	L10025022A	L10025045A
	500/PK	L10013022B	L10013045B	L10025022B	L10025045B
PTFE (polytetrafluoroethylene)	100/PK	L11013022A	L11013045A	L11025022A	L11025045A
	500/PK	L11013022B	L11013045B	L11025022B	L11025045B
PVDF (polyvinyldifluoride)	100/PK	L12013022A	L12013045A	L12025022A	L12025045A
	500/PK	L12013022B	L12013045B	L12025022B	L12025045B
PES (Polyethersulfone)	100/PK	L13013022A	L13013045A	L13025022A	L13025045A
	500/PK	L13013022B	L13013045B	L13025022B	L13025045B
MCE (mixed cellulose acetate and cellulose nitrate)	100/PK	L14013022A	L14013045A	L14025022A	L14025045A
	500/PK	L14013022B	L14013045B	L14025022B	L14025045B

Filter Membranes

Luknova supplies a variety of high quality filter membranes to fit reusable syringe filter holders (13mm and 25mm diameters) and mobile phase filtration system (47mm diameters) for sample preparation and solvent filtration to remove particles from a sample prior to chromatography, filtration of gases, and for the removal of bacteria from a sample.

Order Information

Membrane Type	Diameter	13 mm Diameter		25 mm Diameter		47 mm Diameter	
	Pore Size	0.22µm	0.45µm	0.22µm	0.45µm	0.22µm	0.45µm
	Unit	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.
Nylon	100/PK	L15013022A	L15013045A	L15025022A	L15025045A	L15047022A	L15047045A
PTFE	100/PK	L16013022A	L16013045A	L16025022A	L16025045A	L16047022A	L16047045A
PVDF	100/PK	L17013022A	L17013045A	L17025022A	L17025045A	L17047022A	L17047045A
PES	100/PK	L18013022A	L18013045A	L18025022A	L18025045A	L18047022A	L18047045A
MCE	100/PK	L19013022A	L19013045A	L19025022A	L19025045A	L19047022A	L19047045A

Significant Savings

Significant savings are available for large quantity purchases, please email to us at service@luknova.com for price inquiry.

Syringe Filter Chemical Compatibility

Chemical	Nylon	PTFE	PVDF	PES	MCE
Acids					
Acetic, Glacial	+	√	√	√	×
Acetic, 25%	√	√	√	√	√
Hydrochloric, Concentrated	×	√	√	√	×
Hydrochloric, 25%	×	√	√	√	×
Sulphuric, Concentrated	×	√	×	×	×
Sulphuric, 25%	×	√	√	√	×
Nitric, Concentrated	×	√	√	×	×
Nitric, 25%	×	√	√	√	×
Phosphoric, 25%	×	√	ND	ND	√
Formic, 25%	×	√	ND	ND	+
Trichloroacetic, 25%	×	√	ND	ND	√
Alcohols					
Methanol, 98%	√	√	√	√	√
Ethanol, 98%	√	√	√	√	√
Ethanol, 70%	+	√	√	√	√
Isopropanol	√	√	√	√	√
n-Propanol	√	√	√	√	√
Amyl Alcohol, Butanol	√	√	√	√	√
Benzyl Alcohol	√	√	√	ND	+
Ethylene Glycol	√	√	√	√	√
Propylene Glycol	√	√	√	√	+
Glycerol	√	√	√	√	√
Alkalis					
Ammonium Hydroxide, 25%	√	√	+	√	√
Sodium Hydroxide, 25%	√	√	√	√	×
Amines and Amides					
Dimethyl Formamide	+	√	×	×	×
Diethylacetamide	√	√	ND	ND	×
Triethanolamine	√	√	ND	ND	√
Aniline	ND	√	ND	ND	×
Pyridine	√	√	×	×	×
Acetronitrile	√	√	√	+	×
Esters					
Ethyl & Methyl Acetate	√	√	√	×	×
Amyl & Butyl Acetate	√	√	×	×	+
Propyl Acetate	√	√	×	×	+
Propylene Glycol Acetate	ND	√	ND	×	×
2-Ethoxyethyl Acetate	ND	√	ND	×	+
Methyl Cellosolve Acetate	ND	√	ND	×	×
Benzyl Benzoate	√	√	ND	×	√
Isopropyl Myristate	√	√	ND	×	√
Tricresyl Phosphate	ND	√	ND	×	√

Chemical	Nylon	PTFE	PVDF	PES	MCE
Halogenated Hydrocarbons					
Methylene Chloride	+	√	√	×	×
Chloroform	√	√	√	×	×
Trichloroethylene	√	√	√	×	√
Monochlorobenzene	√	√	√	+	√
Freon®	√	√	√	+	√
Carbon Tetrachloride	√	√	√	×	+
Hydrocarbons					
Hexane, Xylene	√	√	√	×	√
Toluene, Benzene	√	√	√	×	√
Kerosene, Gasoline	√	√	√	+	√
Tetralin, Decalin	ND	√	√	ND	√
Ketones					
Acetone	√	√	×	×	×
Cyclohexanone	√	√	×	×	×
Methyl Ethyl Ketone	√	√	+	×	+
Isopropylacetone -	√	√	×	×	√
Methyl Isobutyl Ketone	ND	√	+	×	ND
Organic Oxides					
Ethyl Ether	√	√	√	√	√
Dioxane	√	√	+	×	+
Tretrahydrofuran	√	√	+	×	+
Triethanolamine	√	√	ND	ND	√
Dimethylsulfoxide (DMSO)	√	√	×	×	+
Isopropyl Ether	ND	√	√	√	√
Miscellaneous					
Phenol, Aqueous, 10%	ND	√	+	×	×
Formaldehyde Solution, 30%	√	√	√	√	√
Hydrogen Peroxide, 30%	√	√	ND	ND	√
Silicone Oil & Mineral Oil	ND	√	√	√	√

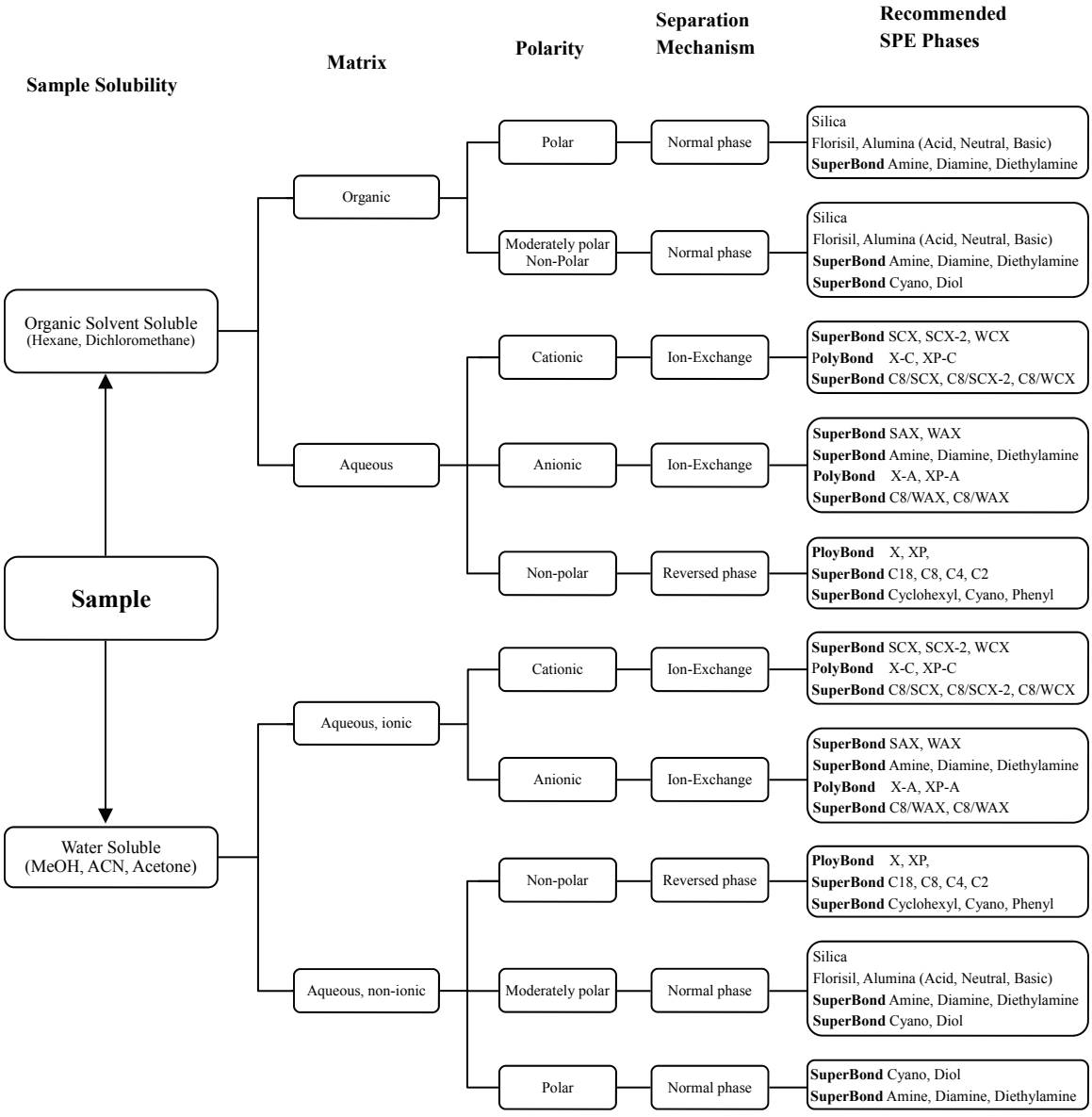
Legend	Description
PTFE	Polytetrafluoroethylene
PVDF	Polyvinyldifluoride
PES	Polyethersulfone
MCE	Mixed cellulose acetate and cellulose nitrate
√	Compatible
+	Limited compatibility (membrane may swell and shrink), use with caution
×	Incompatible (not recommended)
ND	No compatible data available

SPE, 96 Well Plate, Media: Phases

Solid Phase Extraction (SPE) Phases

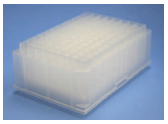
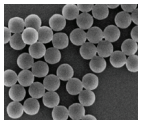
Support	Reversed Phase	Normal Phase	Cation Exchange	Anion Exchange	Mixed Mode/Special Phase
Silica (SuperBond)	C2, C4, C8 C18, C30, CN Cyclohexyl Phenyl	Silica, CN (Cyano) Amine Diol	WCX SCX, SCX-2	WAX, SAX Diamine Diethylamine	C8/WAX, C8/SAX C8/WCX, C8/SCX, C8/SCX-2
Polymer (PolyBond)	X XP		X-C XP-C	X-A XP-A	
Special		Florisil	Celite		Thiol

SPE Phase Selection Guide by sample



Available formats:

SPE tubes, 96 well plates, loose powder, flash columns, and HPLC/UHPLC columns

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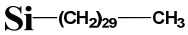
SPE, 96 Well Plate, Media: Phases

SPE Phase Selection by Manufacturer

Luknova	Support	Biotage Isolute®	SiliCycle SiliaPrep	Phenomenex Strata®	Waters Sep-Pak®	M-N Chromabond®	Whatman	J.T Baker BakerBond®	Supelco Discovery®	Supelco Supelclean®	Varian BondElut®
Reversed (Hydrophobic) Phases											
SuperBond C2	Silica	C2	C2 *nec*	-	tC_2	-	-	Ethyl C2	-	-	C2
SuperBond C4	Silica	C4	C4 *nec*	-	-	C4	-	-	-	-	-
SuperBond C8	Silica	C8 (EC)	C8	C8	C_8	-	C8	Octyl (C_8)	DSC-C8	ENVI C8(EC)	C8
SuperBond C8-U	Silica	C8	C8 *nec*	-	-	C8	-	-	-	-	-
SuperBond C18-U, *23%*	Silica	C18	C18 *nec, 23%*	-	-	-	-	-	-	-	-
SuperBond C18, *17%*	Silica	C18(EC)	C18, *17%*	C18-E	tC_{18}	C18 ec	ODS-5	Octadecyl (C_{18})	DSC-C18	ENVI C18(EC)	C18
SuperBond C18-U, *17%*	Silica	MFC18	C18 *nec mono, 17%*	-	C_{18}	-	-	Octadecyl C18 Light Load	DSC-18Lt	-	C18 OH
SuperBond CN	Silica	CN(EC)	Cyano	CN	Cyano Propyl (CN)	CN	-	Cyano (CN)	DSC-CN	LC-CN	Cyano (CN-E)
SuperBond Cyclohexyl	Silica	CH(EC)	Cyclohexyl	-	-	C_6H_{11} ec	-	-	-	-	CH
SuperBond Phenyl	Silica	PH(EC)	Phenyl	Phenyl (PH)	-	C_6H_5	-	Phenyl (C_6H_5)	DSC-Ph	LC-Ph	PH
PolyBond-X	Polymer	ENV+ 101,ABN	-	Strata-X	Oasis HLB	Easy HR-X	-	H_2O-philic DVB	-	-	NEXUS PP, FOCUS PLEXA
PolyBond-XP	Polymer	ENV+ 101,ABN	-	Strata-X	Oasis HLB	Easy HR-X	-	H_2O-philic DVB	-	-	NEXUS PP, FOCUS PLEXA
Normal (Hydrophilic) Phases											
Silica	-	SI	SiliaFlash	Si-1 (Silica)	Silica	SiOH	SIL	Silica	DSC-Si	Silica	SI
SuperBond CN	Silica	CN(EC)	Cyano	CN	Cyano Propyl (CN)	CN	-	Cyano (CN)	DSC-CN	LC-CN	Cyano (CN-E)
SuperBond Amine	Silica	NH2	Amine	NH_2	Amino Propyl (NH2)	NH_2	Amino (NH_2)	Amino (NH_2)	DSC-NH_2	LC-NH_2	Amino Propyl (NH_2)
SuperBond Diol	Silica	DIOL	Diol	-	Diol	OH	-	Diol (COHCOH)	DSC-Diol	LC-Diol	Diol (2OH)
Alumina (Acid)	-	AL-A	Alumina Acidic	-	Alumina A	Alox A	-	-	-	-	Alumina A (AL-A)
Alumina (Neutral)	-	AL-N	Alumina Neutral	-	Alumina N	Alox N	-	(Al_2O_3) Neutral	-	-	Alumina N (AL-N)
Alumina (Basic)	-	AL-B	Alumina Basic	-	Alumina B	Alox B	-	-	-	-	Alumina B (AL-B)
Florisil®	-	FL	Florisil	-	Florisil	Florisil	FLO	-	-	ENVI-Florisil	FL
Ion Exchange Phases											
SuperBond WCX	Silica	CBA	WCX	WCX	Accell Plus CM	PCA	-	Carboxylic Acid (COOH)	-	LC-WCX	CBA
SuperBond SCX	Silica	SCX-3	SCX	SCX	-	SA	SCX	Aromatic Sulfonic Acid	DSC-SCX	LC-SCX (Na^+ counter ion)	SCX
SuperBond SCX-2	Silica	SCX-2	SCX-2	-	-	PSA	-	Propylsulfo-nic Acid	-	-	PRS
PolyBond-X-C	Polymer	CX	-	Strata-X-C	Oasis MCX	-	-	-	-	-	-
PolyBond-XP-C	Polymer	CX	-	Strata-X-C	Oasis MCX	-	-	-	-	-	-
SuperBond WAX	Silica	NH2	Amine	NH_2	Amino Propyl (NH2)	NH_2	Amino (NH_2)	Amino (NH_2)	DSC-NH_2	LC-NH_2	Amino Propyl (NH_2)
SuperBond SAX	Silica	SAX PE-AX	SAX	SAX	Accell Plus QMA	SB	SAX	-	DSC-SAX	LC-SAX	SAX
SuperBond Diamine	Silica	PSA	Diamine	-	PSA	-	-	-	-	-	PSA
SuperBond Diethylamine	Silica	-	Diethylamine	-	-	-	-	-	-	-	
PolyBond-X-A	Polymer	-	-	Strata-X-A	Oasis MAX	-	-	-	-	-	-
PolyBond-XP-A	Polymer	-	-	Strata-X-A	Oasis MAX	-	-	-	-	-	-
Mixed and Special Phases											
SuperBond C8/SAX	Silica	HAX	C8/SAX	Screen-A	-	-	-	Narc-1	-	-	Certify II
SuperBond C8/WCX	Silica	HCX-Q	-	-	-	-	-	-	-	-	-
SuperBond C8/SCX	Silica	HCX	C8/SCX	Screen-C	-	DRUG I	-	Narc-2	DSC-MCAX	-	Certify I
SuperBond C8/SCX-2	Silica		C8/SCX-2	-	-	-	-	-	-	-	-
PolyBond-X-C	Polymer	CX	-	Stratra-X-C	Oasis MCX	-	-	-	-	-	-
PolyBond-XP-C	Polymer	CX	-	Stratra-X-C	Oasis MCX	-	-	-	-	-	-
PolyBond-X-A	Polymer	-	-	Strata-X-A	Oasis MAX	-	-	-	-	-	-
PolyBond-XP-A	Polymer	-	-	Strata-X-A	Oasis MAX	-	-	-	-	-	-
SuperBond Thiol	Silica	-	Thiol	-	-	-	-	-	-	-	-
Celite®	-	Celite	-	Celite	-	-	-	Celite	Celite	Celite	-

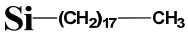
SPE, 96 Well Plate, Bulk Media: Reversed Phases

SuperBond™ C30, 30-U



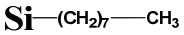
- Tricontyl-functionalized silica gel, reversed phase
- Retains smallest and least hydrophobic compounds from aqueous and biological samples
- Organic loading 26%, particle size 50µm
- Available in both endcapped and unendcapped (C30-U)
- Endcapped C30 enables additional non-polar retention by minimizing polar silanol interactions
- Unendcapped C30 (C30-U) combined primary non-polar retention with additional secondary polar silanol interaction, leading to enhanced extraction of hydroxyl or amine compounds
- More retentive than C18-functionalized silica gel

SuperBond™ C18, C18-U



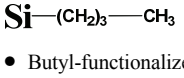
- Octadecyl-functionalized silica gel, reversed phase
- Extraction of most non-polar organic analytes from aqueous and biological samples
- Organic loading 22% and 17%, particle size 50µm
- Available in both endcapped and unendcapped (C18-U)
- Endcapped C18 enables additional non-polar retention by minimizing polar silanol interactions
- Unendcapped C18 (C18-U) combined primary non-polar retention with additional secondary polar silanol interaction, leading to enhanced extraction of hydroxyl or amine compounds
- Less retentive alternative to C30-functionalized silica gel

SuperBond™ C8, C8-U



- Octyl-functionalized silica gel, reversed phase
- Less retentive alternative to C8-functionalized silica gel
- Organic loading 11%, particle size 50µm
- Available in both endcapped and unendcapped (C8-U)

SuperBond™ C4

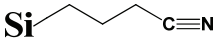


- Butyl-functionalized silica gel, reversed phase
- Less retentive alternative to C8-functionalized silica gel
- Organic loading 9%, particle size 50µm, un-endcapped

Significant Savings

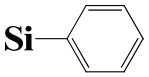
Significant savings are available for large quantity purchases, please email to us at service@luknova.com for price inquiry.

SuperBond™ Cyano



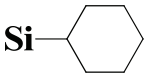
- Endcapped propylcyano-functionalized silica gel
- Application in reversed phase and normal phase
- In reverse phase application, it is less retentive alternative to C8 and C18-functionalized silica gel. It retains non-polar compounds that are retained too strongly on C8 and C18.
- In normal phase, it retains polar compounds out of the non-polar mixture, such as polar compounds from hexane and oil and extracts hydroxyl and amino groups
- Organic loading 7%, particle size 50µm

SuperBond™ Phenyl



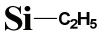
- Phenyl-functionalized silica gel, reversed phase
- Retains most non-polar aromatic compounds
- Extraction of basic analytes
- Organic loading 11%, particle size 50µm
- Endcapped with minimum polar silanol interactions

SuperBond™ Cyclohexyl



- Cyclohexyl-functionalized silica gel, reversed phase
- Extraction of phenolic compounds
- Less retentive alternative to C8 and C18-bonded silica
- Organic loading 11%, particle size 50µm
- Endcapped with minimum polar silanol interactions

SuperBond™ C2



- Ethyl-functionalized silica gel, reversed phase
- Less retentive alternative to C4-functionalized silica gel
- Organic loading 7%, particle size 50µm, un-endcapped

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SPE, 96 Well Plate, Bulk Media: Reversed Phases

Order Information

Product Format	Bed Mass/Tube Volume/Qty	Reverse Phases (Hydrophobic/Non-Polar)					
		C30	C30-U	C18-U (23%)	C18 (17%)	C18-U (17%)	C8
SPE	50mg/1mL/100PK	LU055AA	LU056AA	LU054AA	LU011AA	LU012AA	LU013AA
	100mg/1mL/100PK	LU055AB	LU056AB	LU054AB	LU011AB	LU012AB	LU013AB
	100mg/3mL/50PK	LU055BA	LU056BA	LU054BA	LU011BA	LU012BA	LU013BA
	200mg/3mL/50PK	LU055BB	LU056BB	LU054BB	LU011BB	LU012BB	LU013BB
	500mg/3mL/50PK	LU055BC	LU056BC	LU054BC	LU011BC	LU012BC	LU013BC
	500mg/6mL/30PK	LU055CA	LU056CA	LU054CA	LU011CA	LU012CA	LU013CA
	1g/6mL/30PK	LU055CB	LU056CB	LU054CB	LU011CB	LU012CB	LU013CB
	2g/15mL/20PK	LU055DA	LU056DA	LU054DA	LU011DA	LU012DA	LU013DA
	5g/25mL/20PK	LU055EA	LU056EA	LU054EA	LU011EA	LU012EA	LU013EA
	10g/25mL/20PK	LU055EB	LU056EB	LU054EB	LU011EB	LU012EB	LU013EB
	10g/75mL/16PK	LU055FA	LU056FA	LU054FA	LU011FA	LU012FA	LU013FA
	20g/75mL/16PK	LU055FB	LU056FB	LU054FB	LU011FB	LU012FB	LU013FB
	25g/150mL/8PK	LU055GA	LU056GA	LU054GA	LU011GA	LU012GA	LU013GA
	50g/150mL/8PK	LU055GB	LU056GB	LU054GB	LU011GB	LU012GB	LU013GB
	70g/150mL/8PK	LU055GC	LU056GC	LU054GC	LU011GC	LU012GC	LU013GC
96 Well Plate	50mg/2mL/1PK	LU055HA	LU056HA	LU054HA	LU011HA	LU012HA	LU013HA
	100mg/2mL/1PK	LU055HB	LU056HB	LU054HB	LU011HB	LU012HB	LU013HB
	200mg/2mL/1PK	LU055HA	LU056HA	LU054HA	LU011HA	LU012HA	LU013HA
Bulk Media	1Kg/1PK	LU055BM	LU056BM	LU054BM	LU011BM	LU012BM	LU013BM

Order Information

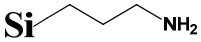
Product Format	Bed Mass/Tube Volume/Qty	Reverse Phases (Hydrophobic/Non-Polar)					
		C8-U	C4	C2	Cyano	Phenyl	Cyclohexyl
SPE	50mg/1mL/100PK	LU014AA	LU057AA	LU058AA	LU022AA	LU015AA	LU017AA
	100mg/1mL/100PK	LU014AB	LU057AB	LU058AB	LU022AB	LU015AB	LU017AB
	100mg/3mL/50PK	LU014BA	LU057BA	LU058BA	LU022BA	LU015BA	LU017BA
	200mg/3mL/50PK	LU014BB	LU057BB	LU058BB	LU022BB	LU015BB	LU017BB
	500mg/3mL/50PK	LU014BC	LU057BC	LU058BC	LU022BC	LU015BC	LU017BC
	500mg/6mL/30PK	LU014CA	LU057CA	LU058CA	LU022CA	LU015CA	LU017CA
	1g/6mL/30PK	LU014CB	LU057CB	LU058CB	LU022CB	LU015CB	LU017CB
	2g/15mL/20PK	LU014DA	LU057DA	LU058DA	LU022DA	LU015DA	LU017DA
	5g/25mL/20PK	LU014EA	LU057EA	LU058EA	LU022EA	LU015EA	LU017EA
	10g/25mL/20PK	LU014EB	LU057EB	LU058EB	LU022EB	LU015EB	LU017EB
	10g/75mL/16PK	LU014FA	LU057FA	LU058FA	LU022FA	LU015FA	LU017FA
	20g/75mL/16PK	LU014FB	LU057FB	LU058FB	LU022FB	LU015FB	LU017FB
	25g/150mL/8PK	LU014GA	LU057GA	LU058GA	LU022GA	LU015GA	LU017GA
	50g/150mL/8PK	LU014GB	LU057GB	LU058GB	LU022GB	LU015GB	LU017GB
	70g/150mL/8PK	LU014GC	LU057GC	LU058GC	LU022GC	LU015GC	LU017GC
96 Well Plate	50mg/2mL/1PK	LU014HA	LU057HA	LU058HA	LU022HA	LU015HA	LU017HA
	100mg/2mL/1PK	LU014HB	LU057HB	LU058HB	LU022HB	LU015HB	LU017HB
	200mg/2mL/1PK	LU014HA	LU057HA	LU058HA	LU022HA	LU015HA	LU017HA
Bulk Media	1Kg/1PK	LU014BM	LU057BM	LU058BM	LU022BM	LU015BM	LU017BM

SPE, 96 Well Plate, Bulk Media: Normal Phases

SuperBond™ Silica

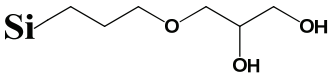
- Most polar sorbent available to retain polar compounds, such as alcohols, aldehydes, amines, drugs, dyes, herbicides, pesticides, ketones, nitro compounds, organic acids, phenols, and steroids in a nonpolar matrix
- Able to separate compounds with very similar structures
- Apply the analytes in a nonpolar solvent, then use polarity gradient to increase the solvent polarity by progressively adding polar modifiers, such as ethyl acetate or tetrahydrofuran (THF) to accomplish the separation
- Acid washed to remove metallic impurities and acidic
- Particle size 50µm, pore 60Å, surface area 500 m^2/g

SuperBond™ Amine (WAX)



- Aminopropyl-functionalized silica gel, very polar sorbent
- Due function of hydrogen bonding and weak anion exchange, with pKa < 9.8
- Retain polar compounds, carbohydrates, dyes, lipids, and mycotoxins
- Also utilized as SuperBond WAX (weak anion exchanger) to retain strong anions, such as sulfonic acids, from aqueous solution, and a scavenger for strong acids, chlorides, isocyanates, and electrophiles
- Metal scavenger for Pd, Ru, Rh, Cu, Fe, Co, and Ni
- Organic loading 6.7%, 50µm, pore 60Å, unendcapped

SuperBond™ Diol



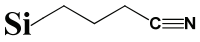
- 1,2-dihydroxypropyl propyl ether-functionalized silica gel
- Retains polar compounds, short alkyl chains with polar groups, and structural isomers
- Preferred scavenger for boronic acids
- Less polar than silica, and an alternative to silica to retain acidic compounds
- Organic loading 8%, particle size 50µm, un-endcapped

Florisil®

MgO_3Si

- Magnesium loaded silica gel, referred to as a magnesium silicate, manufactured by U.S. Silica Company
- Polar sorbent with weak basic feature
- Ideal for extraction of polar compounds from non-polar matrix
- Large particle size (200µm) allows easily extraction of viscous samples and large volume samples
- Extract chlorinated pesticides and pesticide residues

SuperBond™ Cyano



- Endcapped propylcyano-functionalized silica gel
- Application in reversed phase and normal phase
- In reverse phase application, it is less retentive alternative to C8 and C18-functionalized silica gel. It retains non-polar compounds that are retained too strongly on C8 and C18.
- In normal phase, it retains polar compounds out of the non-polar mixture, such as polar compounds from hexane and oil and extracts hydroxyl and amino groups
- Organic loading 7%, particle size 50µm

Alumina

Al_2O_3

- A polar sorbent and classic Lewis acid with absence of two electrons in the aluminum center.
- Alumina-A, Acidic (pH~4.5) and more retentive toward electron-rich compounds, neutral or anionic compounds
- Alumina-B, Basic (pH~9.5) and more retentive toward cationic compounds or hydrogen-bonding species
- Alumina-N, Neutral (pH~7.5) and retentive with highly aromatic compounds and neutral hydroxyls
- A polar alternative to silica gel in normal phase applications to extract polar analytes

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SPE, 96 Well Plate, Bulk Media: Normal Phases

Order Information

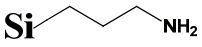
Product Format	Bed Mass/Tube Volume/Qty	Normal Phases (Hydrophilic/Polar)					
		Silica	Amine/WAX	Diol	Florisil®	Cyano	Carbon
SPE	50mg/1mL/100PK	LU019AA	LU029AA	LU021AA	LU024AA	LU022AA	LU028AA
	100mg/1mL/100PK	LU019AB	LU029AB	LU021AB	LU024AB	LU022AB	LU028AB
	100mg/3mL/50PK	LU019BA	LU029BA	LU021BA	LU024BA	LU022BA	LU028BA
	200mg/3mL/50PK	LU019BB	LU029BB	LU021BB	LU024BB	LU022BB	LU028BB
	500mg/3mL/50PK	LU019BC	LU029BC	LU021BC	LU024BC	LU022BC	LU028BC
	500mg/6mL/30PK	LU019CA	LU029CA	LU021CA	LU024CA	LU022CA	LU028CA
	1g/6mL/30PK	LU019CB	LU029CB	LU021CB	LU024CB	LU022CB	LU028CB
	2g/15mL/20PK	LU019DA	LU029DA	LU021DA	LU024DA	LU022DA	LU028DA
	5g/25mL/20PK	LU019EA	LU029EA	LU021EA	LU024EA	LU022EA	LU028EA
	10g/25mL/20PK	LU019EB	LU029EB	LU021EB	LU024EB	LU022EB	LU028EB
	10g/75mL/16PK	LU019FA	LU029FA	LU021FA	LU024FA	LU022FA	LU028FA
	20g/75mL/16PK	LU019FB	LU029FB	LU021FB	LU024FB	LU022FB	LU028FB
	25g/150mL/8PK	LU019GA	LU029GA	LU021GA	LU024GA	LU022GA	LU028GA
	50g/150mL/8PK	LU019GB	LU029GB	LU021GB	LU024GB	LU022GB	LU028GB
	70g/150mL/8PK	LU019GC	LU029GC	LU021GC	LU024GC	LU022GC	LU028GC
96 Well Plate	50mg/2mL/1PK	LU019HA	LU029HA	LU021HA	LU024HA	LU022HA	LU028HA
	100mg/2mL/1PK	LU019HB	LU029HB	LU021HB	LU024HB	LU022HB	LU028HB
	200mg/2mL/1PK	LU019HA	LU029HA	LU021HA	LU024HA	LU022HA	LU028HA
Bulk Media	1Kg/1PK	LU019BM	LU029BM	LU021BM	LU024BM	LU022BM	LU028BM

Order Information

Product Format	Bed Mass/Tube Volume/Qty	Normal Phases (Hydrophilic/Polar)		
		Alumina-A	Alumina-B	Alumina-N
SPE	50mg/1mL/100PK	LU025AA	LU027AA	LU026AA
	100mg/1mL/100PK	LU025AB	LU027AB	LU026AB
	100mg/3mL/50PK	LU025BA	LU027BA	LU026BA
	200mg/3mL/50PK	LU025BB	LU027BB	LU026BB
	500mg/3mL/50PK	LU025BC	LU027BC	LU026BC
	500mg/6mL/30PK	LU025CA	LU027CA	LU026CA
	1g/6mL/30PK	LU025CB	LU027CB	LU026CB
	2g/15mL/20PK	LU025DA	LU027DA	LU026DA
	5g/25mL/20PK	LU025EA	LU027EA	LU026EA
	10g/25mL/20PK	LU025EB	LU027EB	LU026EB
	10g/75mL/16PK	LU025FA	LU027FA	LU026FA
	20g/75mL/16PK	LU025FB	LU027FB	LU026FB
	25g/150mL/8PK	LU025GA	LU027GA	LU026GA
	50g/150mL/8PK	LU025GB	LU027GB	LU026GB
	70g/150mL/8PK	LU025GC	LU027GC	LU026GC
96 Well Plate	50mg/2mL/1PK	LU025HA	LU027HA	LU026HA
	100mg/2mL/1PK	LU025HB	LU027HB	LU026HB
	200mg/2mL/1PK	LU025HA	LU027HA	LU026HA
Bulk Media	1Kg/1PK	LU025BM	LU027BM	LU026BM

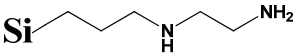
SPE, 96 Well Plate, Bulk Media: Anion Exchange

SuperBond™ WAX (NH2, Amine)



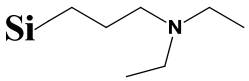
- Aminopropyl-functionalized silica gel, very polar sorbent
- Due function of hydrogen bonding and weak anion exchange, with pKa < 9.8
- Weak Anion Exchanger (WAX) to retain strong anions, such as sulfonic acids, from aqueous solution, and a scavenger for strong acids, chlorides, isocyanates, and electrophiles
- Also utilized as normal phase to retain polar compounds, carbohydrates, dyes, lipids, and mycotoxins
- Metal scavenger for Pd, Ru, Rh, Cu, Fe, Co, and Ni
- Organic loading 6.7%, 50µm, pore 60Å, unendcapped

SuperBond™ Diamine



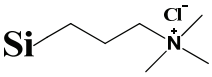
- N-propylethane-1,2-diamine-functionalized silica gel
- WAX phase with pKa 10 to 11
- A scavenger for acids, acid chlorides, cyclic compounds, cholesterols, anhydrides, aldehydes, isocyanates, chloroformates, and other lipid type compounds and electrophiles
- A scavenger for metals, such as Pd, Rh, Co, Cu, Fe, Ru, Cd, Au, V, Zn,, Pt, and Ni et al
- Organic loading 9.7%, 50µm, pore 60Å, unendcapped

SuperBond™ Diethylamine



- Diethylaminopropyl-functionalized silica gel
- A tertiary amine as a base and ion exchanger
- Weak Anion Exchanger phase with pKa ~10.6
- Better retain strong anions, such as sulfonic acids, from aqueous solution than SAX
- A scavenger for strong acids, chlorides, cyclic compounds, cholesterols, and other compounds
- Organic loading 8.4%, 50µm, pore 60Å, unendcapped

SuperBond™ SAX



- Trimethylaminopropyl chloride-bonded silica gel
- A quaternary amine with chloride counter ion
- Strongest Anion Exchanger (SAX) sorbent available
- Retain weaker anions such as carboxylic acids, sulfonic acids, and phosphates that may not retain strongly enough on weaker anion exchange phases
- Strong basic character to extract anions from aqueous solution and a scavenger for weak acids, sulfonyl chlorides, isocyanates, biomolecules, and weak electrophiles
- Organic loading 8.4%, 50µm, pore 60Å, unendcapped

Order Information

Product Format	Bed Mass/Tube Volume/Qty	Anion Exchanger Phases (AEP, Silica Based)			
		WAX (NH2)	Diethylamine	Diamine	SAX
SPE	50mg/1mL/100PK	LU029AA	LU031AA	LU032AA	LU030AA
	100mg/1mL/100PK	LU029AB	LU031AB	LU032AB	LU030AB
	100mg/3mL/50PK	LU029BA	LU031BA	LU032BA	LU030BA
	200mg/3mL/50PK	LU029BB	LU031BB	LU032BB	LU030BB
	500mg/3mL/50PK	LU029BC	LU031BC	LU032BC	LU030BC
	500mg/6mL/30PK	LU029CA	LU031CA	LU032CA	LU030CA
	1g/6mL/30PK	LU029CB	LU031CB	LU032CB	LU030CB
	2g/24mL/20PK	LU029DA	LU031DA	LU032DA	LU030DA
	5g/25mL/20PK	LU029EA	LU031EA	LU032EA	LU030EA
	10g/25mL/20PK	LU029EB	LU031EB	LU032EB	LU030EB
	10g/75mL/16PK	LU029FA	LU031FA	LU032FA	LU030FA
	20g/75mL/16PK	LU029FB	LU031FB	LU032FB	LU030FB
	25g/240mL/8PK	LU029GA	LU031GA	LU032GA	LU030GA
	50g/150mL/8PK	LU029GB	LU031GB	LU032GB	LU030GB
	70g/150mL/8PK	LU029GC	LU031GC	LU032GC	LU030GC
96 Well Plate	50mg/2mL/1PK	LU029HA	LU031HA	LU032HA	LU030HA
	100mg/2mL/1PK	LU029HB	LU031HB	LU032HB	LU030HB
	200mg/2mL/1PK	LU029HA	LU031HA	LU032HA	LU030HA
Bulk Media	1Kg/1PK	LU029BM	LU031BM	LU032BM	LU030BM

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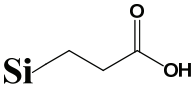
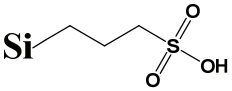
SPE, 96 Well Plate, Bulk Media: Cation Exchange

SuperBond™ WCX



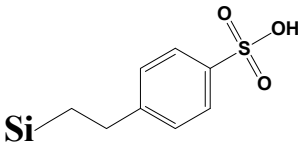
- Carboxylic acid-bonded silica gel, medium polarity sorbent
- Weak Cation Exchanger (WCX) phase with pKa < 4.8
- Extract strong (quaternary) amines
- A scavenger for strong amines and carbonates
- Extract strong cations and/or weak cations in solution
- At pH > 4.8, the functional groups carry a negative charge that can be used to retain cationic compounds; lowering pH to 2.8 or lower effectively neutralizes the functional groups, allowing the retained analytes to elute from the sorbent
- Organic loading 9%, 50µm, pore 60Å, unendcapped

SuperBond™ SCX-2



- Propylsulfonic acid-functionalized silica gel
- Cation exchanger phase, pKa < 1, to extract amines
- Acid catalyst and basic impurity scavenger for amines, alcohols, and other nucleophiles
- Less acidic than SCX, benzenesulfonic acid-bonded silica
- Organic loading 7.1%, 50µm, pore 60Å, unendcapped

SuperBond™ SCX



- Benzenesulfonic acid-bonded silica, ion-exchange sorbent
- Strong Cation Exchanger (SCX) phase with pKa < 1
- Extract 1°, 2°, and 3° amines from aqueous/biological samples
- A scavenger for amines, alcohols, and other nucleophiles
- As compared to SCX-2, the presence of the benzene ring allows for retaining non-polar analytes
- Excellent dual function to extract cationic and non-polar
- Organic loading 11%, 50µm, pore 60Å, unendcapped
- Elute in basic conditions with 2 pH units over sample pK value

Celite 545

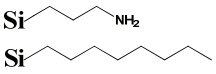
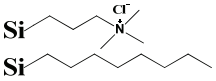
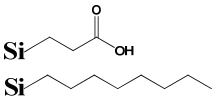
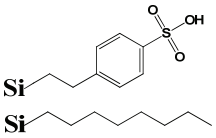
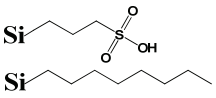
- Diatomaceous-earth base material as common filtration media
- Hold up particulate materials such as Pt (IV) oxide and Pd/C catalysts as filtration device for subsequent workup

Order Information

Product Format	Bed Mass/Tube Volume/Qty	Cation Exchanger Phases (CEP, Silica Based)			Filtration
		WCX	SCX	SCX-2 (Propylsulfonic acid)	Celite
SPE	50mg/1mL/100PK	LU033AA	LU034AA	LU035AA	LU059AA
	100mg/1mL/100PK	LU033AB	LU034AB	LU035AB	LU059AB
	100mg/3mL/50PK	LU033BA	LU034BA	LU035BA	LU059BA
	350mg/3mL/50PK	LU033BB	LU034BB	LU035BB	LU059BB
	500mg/3mL/50PK	LU033BC	LU034BC	LU035BC	LU059BC
	500mg/6mL/30PK	LU033CA	LU034CA	LU035CA	LU059CA
	1g/6mL/30PK	LU033CB	LU034CB	LU035CB	LU059CB
	2g/15mL/20PK	LU033DA	LU034DA	LU035DA	LU059DA
	5g/25mL/20PK	LU033EA	LU034EA	LU035EA	LU059EA
	10g/25mL/20PK	LU033EB	LU034EB	LU035EB	LU059EB
	10g/75mL/16PK	LU033FA	LU034FA	LU035FA	LU059FA
	20g/75mL/16PK	LU033FB	LU034FB	LU035FB	LU059FB
	25g/150mL/8PK	LU033GA	LU034GA	LU035GA	LU059GA
	50g/150mL/8PK	LU033GB	LU034GB	LU035GB	LU059GB
	70g/150mL/8PK	LU033GC	LU034GC	LU035GC	LU059GC
96 Well Plate	50mg/2mL/1PK	LU033HA	LU034HA	LU035HA	LU059HA
	100mg/2mL/1PK	LU033HB	LU034HB	LU035HB	LU059HB
	200mg/2mL/1PK	LU033HA	LU034HA	LU035HA	LU059HA
Bulk Media	1Kg/1PK	LU033BM	LU034BM	LU035BM	LU059BM

SPE, 96 Well Plate, Bulk Media: Mixed-Mode

SuperBond™ Mixed-Mode Phases (Silica Based)

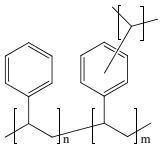
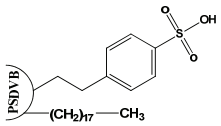
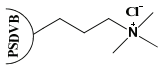
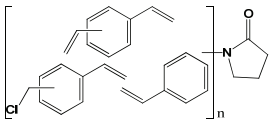
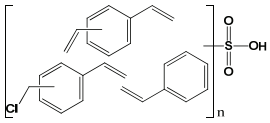
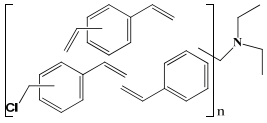
Phases	Chemistry	Typical Applications and Properties
SuperBond **C8/WAX**		Dual functions of reverse phase C8 and WAX phase to retain strong acids and hydrophobic (non-polar) compounds. Organic loading 12%, particle size 50µm, pore 60Å, unendcapped.
SuperBond **C8/SAX**		Dual functions of reverse phase C8 and SAX phase to retain weak acids and hydrophobic (non-polar) compounds from aqueous solution. Organic loading 14%, particle size 50µm, pore 60Å, unendcapped.
SuperBond **C8/WCX**		Dual functions of reverse phase C8 and WCX phase to retain strong basic compounds and hydrophobic (non-polar) compounds, such as strong (quaternary) amines. Organic loading 12%, particle size 50µm, pore 60Å, unendcapped.
SuperBond **C8/SCX**		Dual functions of reverse phase C8 and SCX phase to retain weak basic compounds and hydrophobic (non-polar) compounds from aqueous solution. As compared to C8/SCX-2, the presence of the benzene ring allows for retaining non-polar analytes. Organic loading 14%, particle size 50µm, pore 60Å, unendcapped.
SuperBond **C8/SCX-2**		Dual functions of reverse phase C8 and SCX-2 phase to retain strong acids and hydrophobic (non-polar) compounds. Less acidic than C8/SCX. Alternative to C8/SCX. Organic loading 15%, particle size 50µm, pore 60Å, unendcapped.

Order Information

Product Format	Bed Mass/Tube Volume/Qty	Mixed-Mode Phases (MMP, Silica Based)					PolyBond-X-C (Page #21, Polymeric
		C8/WAX	C8/SAX	C8/WCX	C8/SCX	C8/SCX-2	
SPE	50mg/1mL/100PK	LU037AA	LU038AA	LU039AA	LU041AA	LU040AA	LU048AA
	100mg/1mL/100PK	LU037AB	LU038AB	LU039AB	LU041AB	LU040AB	LU048AB
	100mg/3mL/50PK	LU037BA	LU038BA	LU039BA	LU041BA	LU040BA	LU048BA
	200mg/3mL/50PK	LU037BB	LU038BB	LU039BB	LU041BB	LU040BB	LU048BB
	500mg/3mL/50PK	LU037BC	LU038BC	LU039BC	LU041BC	LU040BC	LU048BC
	500mg/6mL/30PK	LU037CA	LU038CA	LU039CA	LU041CA	LU040CA	LU048CA
	1g/6mL/30PK	LU037CB	LU038CB	LU039CB	LU041CB	LU040CB	LU048CB
	2g/15mL/20PK	LU037DA	LU038DA	LU039DA	LU041DA	LU040DA	LU048DA
	5g/25mL/20PK	LU037EA	LU038EA	LU039EA	LU041EA	LU040EA	LU048EA
	10g/25mL/20PK	LU037EB	LU038EB	LU039EB	LU041EB	LU040EB	LU048EB
	10g/75mL/16PK	LU037FA	LU038FA	LU039FA	LU041FA	LU040FA	LU048FA
	20g/75mL/16PK	LU037FB	LU038FB	LU039FB	LU041FB	LU040FB	LU048FB
	25g/150mL/8PK	LU037GA	LU038GA	LU039GA	LU041GA	LU040GA	LU048GA
	50g/150mL/8PK	LU037GB	LU038GB	LU039GB	LU041GB	LU040GB	LU048GB
	70g/150mL/8PK	LU037GC	LU038GC	LU039GC	LU041GC	LU040GC	LU048GC
96 Well Plate	50mg/2mL/1PK	LU037HA	LU038HA	LU039HA	LU041HA	LU040HA	LU048HA
	100mg/2mL/1PK	LU037HB	LU038HB	LU039HB	LU041HB	LU040HB	LU048HB
	200mg/2mL/1PK	LU037HA	LU038HA	LU039HA	LU041HA	LU040HA	LU048HA
Bulk Media	1Kg/1PK	LU037BM	LU038BM	LU039BM	LU041BM	LU040BM	LU048BM

SPE, 96 Well Plate, Bulk Media: Polymeric Phases

PolyBond™ Polymeric Phases

Phases	Chemistry	Typical Applications and Properties
PolyBond-X (PSDVB)		High purity and highly cross-linked styrene and divinylbenzene copolymer resin. Combine non-polar retention via π-π and hydrophobic interactions. Complete elimination of secondary silanol interaction from silica-based sorbent. Extraction of polar and non-polar large molecules and proteins, and large environmental samples. Faster flow rates and pH stability 1-14.
PolyBond-X-C		Combined functions of PSDVB, reverse phase C18 and SCX phase to retain weak basic compounds and hydrophobic (non-polar) compounds from aqueous solution, such as amines, alcohols, and other nucleophiles. Faster flow rates and pH stability 1-14. Clean extractions.
PolyBond-X-A		Dual functions of PSDVB and SAX phases to retain weak acids and hydrophobic (non-polar) compounds from aqueous solution. Organic loading 6%. Faster flow rates and pH stability 1-14. Clean extractions.
PolyBond-XP (PSDVBCMS)		Combined functions of high purity and highly cross-linked polystyrene-divinylbenzene-chloromethylstyrene copolymer modified with pyrrolidone. Reversed phase with robust ability to retain both non-polar and polar compounds and their metabolites. Exchange capacity (EC) 0.6mmol/g. pH 1-14.
PolyBond-XP-C		Combined functions of high purity and highly cross-linked polystyrene-divinylbenzene-chloromethylstyrene copolymer modified with sulfuric acid (HSO_3). Dual functions of reversed phase and cation exchange phases to extract basic compounds with cation-exchange groups. EC: 0.6mmol/g.
PolyBond-XP-A		Combined functions of high purity and highly cross-linked polystyrene-divinylbenzene-chloromethylstyrene copolymer modified with triethylamine. Dual functions of reversed phase and anion exchange phase to extract acidic compounds with anion-exchange groups. EC: 0.6mmol/g. pH 1-14.

Order Information

Product Format	Bed Mass/Tube Volume/Qty	Polymeric Phases (Ion Exchanger + Hydrophobic/Non-polar)					
		PolyBond-X	**PolyBond-X-C**	**PolyBond-X-A**	**PolyBond-XP**	**PolyBond-XP-C**	**PolyBond-XP-A**
SPE	50mg/1mL/100PK	LU049AA	LU048AA	LU053AA	LU200AA	LU201AA	LU202AA
	100mg/1mL/100PK	LU049AB	LU048AB	LU053AB	LU200AB	LU201AB	LU202AB
	100mg/3mL/50PK	LU049BA	LU048BA	LU053BA	LU200BA	LU201BA	LU202BA
	200mg/3mL/50PK	LU049BB	LU048BB	LU053BB	LU200BB	LU201BB	LU202BB
	500mg/3mL/50PK	LU049BC	LU048BC	LU053BC	LU200BC	LU201BC	LU202BC
	500mg/6mL/30PK	LU049CA	LU048CA	LU053CA	LU200CA	LU201CA	LU202CA
	1g/6mL/30PK	LU049CB	LU048CB	LU053CB	LU200CB	LU201CB	LU202CB
	2g/15mL/20PK	LU049DA	LU048DA	LU053DA	LU200DA	LU201DA	LU202DA
	5g/25mL/20PK	LU049EA	LU048EA	LU053EA	LU200EA	LU201EA	LU202EA
	10g/25mL/20PK	LU049EB	LU048EB	LU053EB	LU200EB	LU201EB	LU202EB
	10g/75mL/16PK	LU049FA	LU048FA	LU053FA	LU200FA	LU201FA	LU202FA
	20g/75mL/16PK	LU049FB	LU048FB	LU053FB	LU200FB	LU201FB	LU202FB
	25g/150mL/8PK	LU049GA	LU048GA	LU053GA	LU200GA	LU201GA	LU202GA
	50g/150mL/8PK	LU049GB	LU048GB	LU053GB	LU200GB	LU201GB	LU202GB
	70g/150mL/8PK	LU049GC	LU048GC	LU053GC	LU200GC	LU201GC	LU202GC
96 Well Plate	50mg/2mL/1PK	LU049HA	LU048HA	LU053HA	LU200HA	LU201HA	LU202HA
	100mg/2mL/1PK	LU049HB	LU048HB	LU053HB	LU200HB	LU201HB	LU202HB
	200mg/2mL/1PK	LU049HA	LU048HA	LU053HA	LU200HA	LU201HA	LU202HA
Bulk Media	1Kg/1PK	LU049BM	LU048BM	LU053BM	LU200BM	LU201BM	LU202BM

SPE, 96 Well Plate, Bulk Media: Scavengers

SuperBond™ and PolyBond™ Scavengers

Phases	Typical Applications and Properties
SuperBond **Amine/WAX**	Scavenger for strong acids, chlorides, isocyanates, and electrophiles and various metals. Page #18.
SuperBond **Diamine**	Scavenger for acids, acid chlorides, cyclic compounds, cholesterols, anhydrides, aldehydes, isocyanates, chloroformates, and other lipid type compounds and electrophiles and various metals. Page 18.
SuperBond **Diethylamine**	Scavenger for strong acids, chlorides, cyclic compounds, and cholesterols. Page 18.
SuperBond **Thiol**	Scavenger of acid chlorides, isocyanates, electrophiles (e.g. alkyl-, benzyl- and allyl- halides), and metals.
SuperBond **SAX** PolyBond-**X-A, -XP-A**	Scavengers for weak acids, sulfonyl chlorides, isocyanates, biomolecules, and weak electrophiles. Page 18 for SuperBond SAX and Page 21 for PolyBond-X-A, -XP-A.
SuperBond **WCX**	A scavenger for strong amines and carbonates, strong cations and/or weak cations in solution. Page 19.
SuperBond **SCX, SCX-2** PolyBond-**X-C, -XP-C**	A scavenger for amines, alcohols, and other nucleophiles, cationic and non-polar compounds. Page 19 for SuperBond SCX, SCX-2 and Page 21 for PolyBond-X-C, -XP-C.
Celite	For Pt (IV) oxide and Pd/C particulate materials. Page 19.

Common Metal Scavenger Selection Guide

	Ag (I)	Cr	Co (II)	Cu (II)	Cu (I)	Fe (III)	Hg	Ni (II)	Pb	Pd (II)	Pd (0)	Pt	Rh (III)	Rh (II)	Rh (I)	Ru (IV)	Ru (II)	Sn	V
SuperBond **Amine**	√	—	√√	√√	√√	√√	—	√√	√√	√√	√√	√	√√	√√	√√	√√	√√	—	√
SuperBond **Diamine**	—	√	√√	√√	√√	√√	—	√	√√	√√	√√	√	√√	√√	√√	√	√	—	√
SuperBond **Thiol**	√√	—	—	√√	√√	—	√√	√	√√	√√	√√	√√	√√	√√	√√	√√	√	√	—

√√ preferred scavengers √ scavengers — not tested and/or no significant scanvenging ability

Order Information

Product Format	Bed Mass/Tube Volume/Qty	Common Metal Scavenger (Silica Based)				Celite
		Amine	Diamine	Diethylamine	Thiol	
SPE	50mg/1mL/100PK	LU029AA	LU032AA	LU031AA	LU047AA	LU059AA
	100mg/1mL/100PK	LU029AB	LU032AB	LU031AB	LU047AB	LU059AB
	100mg/3mL/50PK	LU029BA	LU032BA	LU031BA	LU047BA	LU059BA
	200mg/3mL/50PK	LU029BB	LU032BB	LU031BB	LU047BB	LU059BB
	500mg/3mL/50PK	LU029BC	LU032BC	LU031BC	LU047BC	LU059BC
	500mg/6mL/30PK	LU029CA	LU032CA	LU031CA	LU047CA	LU059CA
	1g/6mL/30PK	LU029CB	LU032CB	LU031CB	LU047CB	LU059CB
	2g/15mL/20PK	LU029DA	LU032DA	LU031DA	LU047DA	LU059DA
	5g/25mL/20PK	LU029EA	LU032EA	LU031EA	LU047EA	LU059EA
	10g/25mL/20PK	LU029EB	LU032EB	LU031EB	LU047EB	LU059EB
	10g/75mL/16PK	LU029FA	LU032FA	LU031FA	LU047FA	LU059FA
	20g/75mL/16PK	LU029FB	LU032FB	LU031FB	LU047FB	LU059FB
	25g/150mL/8PK	LU029GA	LU032GA	LU031GA	LU047GA	LU059GA
	50g/150mL/8PK	LU029GB	LU032GB	LU031GB	LU047GB	LU059GB
	70g/150mL/8PK	LU029GC	LU032GC	LU031GC	LU047GC	LU059GC
96 Well Plate	50mg/2mL/1PK	LU029HA	LU032HA	LU031HA	LU047HA	LU059HA
	100mg/2mL/1PK	LU029HB	LU032HB	LU031HB	LU047HB	LU059HB
	200mg/2mL/1PK	LU029HA	LU032HA	LU031HA	LU047HA	LU059HA
Bulk Media	1Kg/1PK	LU029BM	LU032BM	LU031BM	LU047BM	LU059BM

SPE, 96 Well Plate, Bulk Media: Vacuum Manifold

Vacuum Manifolds

P/N	Description
L2080120	A complete set of 12-port vacuum SPE manifold for general application in achieving consistent extraction and filtration results. It includes manifold lid, lid gasket, glass chamber, 12 Teflon needles, 12 stopcocks, and vacuum gauge. Adjustable racks accommodate a variety of test tubes, vials and flasks. 1/PK.
L2080240	A complete set of 24-port vacuum SPE manifold for general application in achieving consistent extraction and filtration results. It includes manifold lid, lid gasket, glass chamber, 24 Teflon needles, 24 stopcocks, and vacuum gauge. Adjustable racks accommodate a variety of test tubes, vials and flasks. 1/PK.

Order Information

Empty SPE Tubes and Polyethylene Frits (20 µm pore size)

	Tab-less empty tubes (100/PK)		*Frits only*
	Bottom frit inserted, no extra frit	Bottom frit inserted, extra frits come loose	100/PK
1ml	LU000A0	LU000AA	LU000AF
3ml	LU000B0	LU000BA	LU000BF
6ml	LU000C0	LU000CA	LU000CF
15ml	LU000D0	LU000DA	LU000DF
	Standard empty tubes (100/PK)		***Frits only***
	Bottom frit inserted, no extra frit	Bottom frit inserted, extra frits come loose	100/PK
1ml	LT01011	LT01012	LT0101F
3ml	LT03011	LT03012	LT0301F
6ml	LT06011	LT06012	LT0601F
15ml	LT15011	LT15012	LT1501F
25ml	LU000E0	LU000EA	LU000EF
75ml	LU000F0	LU000FA	LU000FF
150ml	LU000G0 (20/PK)	LU000GA (20/PK)	LU000GF (20/PK)

Order Information

Common purification media	1kg/PK	5kg/PK	25kg/PK
Flash Silica, 230-400 mesh (37-63 µm), 60Å	SG230400	SG230400-5	SG230400-25
Flash Silica, 73-240 mesh (60-200 µm), 60Å	SG060200	SG060200-5	SG060200-25
Flash C18, 230-400 mesh (37-63 µm), 60Å	SGFLASHC18-1	SGFLASHC18-5	SGFLASHC18-25
Flash Amine, 230-400 mesh (37-63 µm), 60Å	SGFLASHAM-1	SGFLASHAM-5	SGFLASHAM-25
Flash Diol, 230-400 mesh (37-63 µm), 60Å	SGFLASHDL-1	SGFLASHDL-5	SGFLASHDL-25
Flash Cyano, 230-400 mesh (37-63 µm), 60Å	SGFLASHCY-1	SGFLASHCY-5	SGFLASHCY-25
Flash SAX, 230-400 mesh (37-63 µm), 60Å	SGFLASHSA-1	SGFLASHSA-5	SGFLASHSA-25
Flash SCX, 230-400 mesh (37-63 µm), 60Å	SGFLASHSC-1	SGFLASHSC-5	SGFLASHSC-25
Celite (Kieselguhr), powder, filter agent/aid	CELITE-1	CELITE-5	CELITE-25

Significant Savings

Significant savings are available for large quantity purchases, please email to us at service@luknova.com or contact our distributor for price inquiry.

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