

# SEPAFLASH®

It's not an ordinary FLASH!



Superior Performance

High Reproducibility

Reliability & Compatibility

- Flash Column

Standard Series

E Series

HP Series

Bonded Series

iLOK® Series

Bio Series

- Silica TLC

- Bulk Media



**iLOK™**  
Silica Flash Column SL 120  
Pre-packed 60%, 100 g  
Max operating pressure 200

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# About SANTAI

Santai Technologies is a technology company founded in 2004 and focused on developing separation and purification tools and services for professionals and scientists in pharmaceutical, biotechnology, fine chemicals, natural products and petrochemical industries.

Santai currently offers flash chromatographic columns and accessories for separation and purification of organic compounds, peptides, proteins and other bio-molecules. Santai is known as one of the best and most consistent column packing and chromatography product company in the world. Santai will continue to develop innovative solutions and tools to meet the separation and purification needs of professionals and scientists.

## SANTAI Focus

**Santai** is known as one of the best and most consistent column packing and chromatography product company in the world.

**Santai** offers a full line of products designed for high-reproducibility separation and purification. Try us now!

**Santai** also offers custom packing columns using only selected sources of media.

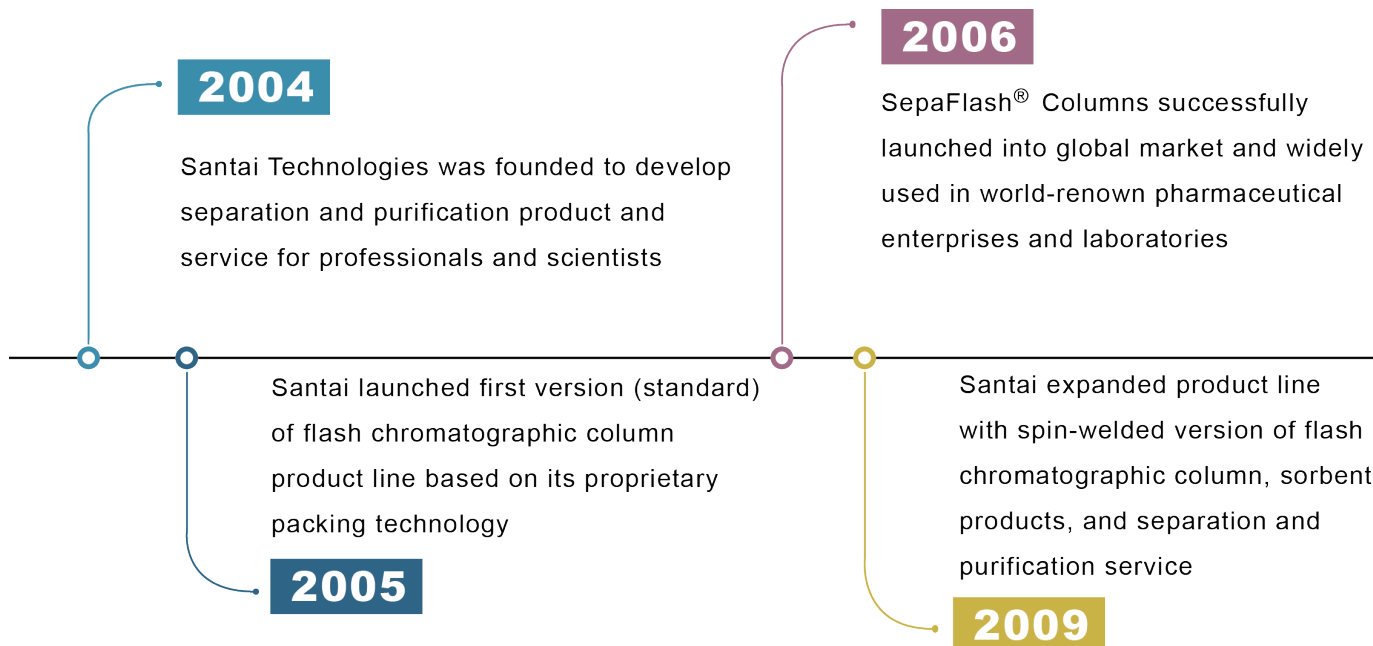
We can quickly produce OEM/private label columns—complete with your own labels AND your own packaging.

**Santai** has operations and warehousing business in many countries across America, Asia and Europe.

Our semi-automated packing process enables us to provide reproducibility with a direct-manufacturing cost structure.

By doing business with us, you are dealing directly with the most highly respected manufacturing engineers and chemists who uphold the highest standards of confidentiality.

**Santai** will continue to develop innovative solutions and tools to meet the separation and purification needs of professionals and scientists.



# Product Highlights

Santai cartridges are an excellent alternative to the other cartridges available on the market as they offer the following advantages:

- Low fines; Neutral pH; 100% guaranteed leak-free
- Clean, pre-packed, pharmaceutical-grade polypropylene cartridges
- Made with UltraPure silica gel (we can pack your own source)
- Tight particle-size distribution to avoid leaching and/or channelling, no tailing
- Water activity and controlled water content for silica
- Innovative and semi-automated packing technology
- Five series available (Standard Series, E Series, HP Series, Bonded Series and iLOK™ Series)
- Proprietary coating technology for TLC plates available
- “ Lot-to-lot” reproducibility since 2004

## 100% COMPATIBILITY with other instruments

- Teledyne Isco (CombiFlash®: Rf, Companion®, RETRIEVE®, OptiX®)
- Biotage (Isolera™, SP, Flash, FlashMaster II)
- Moritex (Purif-α2, Purif-compact)
- Yamazen (Smart Flash EPCLC W-Prep 2XY)
- BUCHI (Reveleris®, Sepacore®)
- Interchim (Puri Flash®)
- Gilson (PLC)

**2013**

Santai developed iLOK™ flash cartridges which offers users convenience for manual assembly, allowing for a flexible sample loading method

**2016**

SepaBean™ machine , a unique flash chromatography system with networking ability and built-in knowledge, was launched

**2015**

Santai developed Bonded Series flash columns, and added sized 3000g to standard version flash column

# SepaFlash® Column Overview for Standard Series

SepaFlash® columns are an excellent alternative to the other columns available on the market, and you will enjoy fast, easy purification and scale-up from milligram to hundreds of grams. The Standard Series columns offer the following advantages:

## Reliable and Reproducible

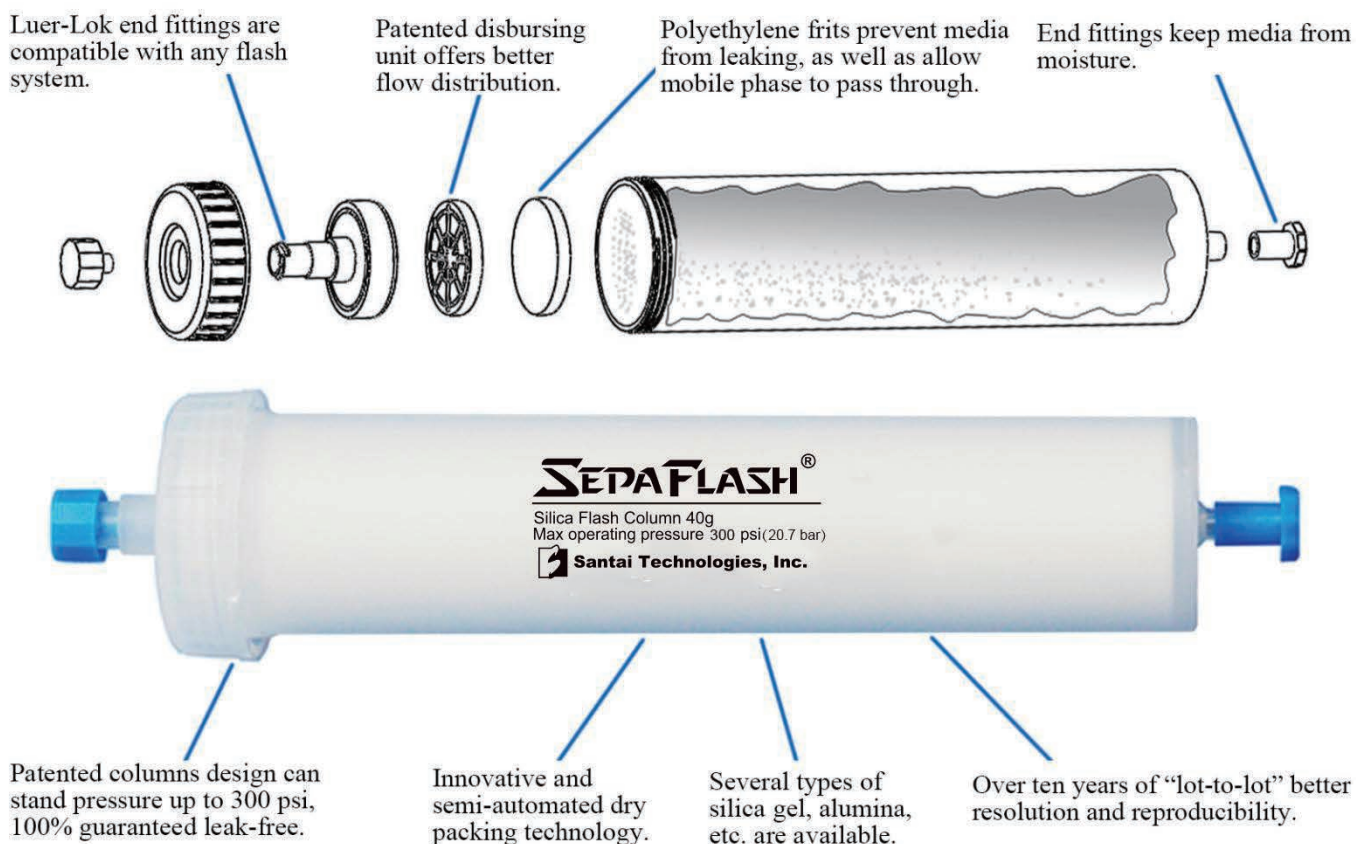
SepaFlash® columns are produced with proprietary dry packing technique for uniform packed sorbent bed with less channeling effect, tighter band and symmetrical peak profile, resulting higher resolution and reproducibility. They feature innovative design with standard Luer-Lok end fittings for quick, easy connection to commercially available flash systems on the market. The quality is consistent for SepaFlash® columns over for decades of years, to ensure that the chemists are able to complete the everyday purification with pleasure.

## Versatile

The Standard Series columns are available from 4 gram up to 3 kg column size allowing purification from 10 milligram up to 300 grams. The enhanced product offering with high-efficiency silica gel (irregular, 25-40  $\mu\text{m}$ , 60  $\text{\AA}$ ) provides an outstanding performance with lower cost of use.

## Safe

Innovative column design on Standard Series columns are pressure rated for safe operation. Machine assembling column heads ensure that the columns are able to withstand the pressure capacity of modern flash systems and not leak valuable compound.



# SepaFlash<sup>®</sup> Column Overview for HP Series

SepaFlash<sup>®</sup> columns are an excellent alternative to the other columns available on the market, and you will enjoy fast, easy purification and scale-up from milligram to dozens of grams. The HP Series columns offer the following advantages:

## Reliable and Reproducible

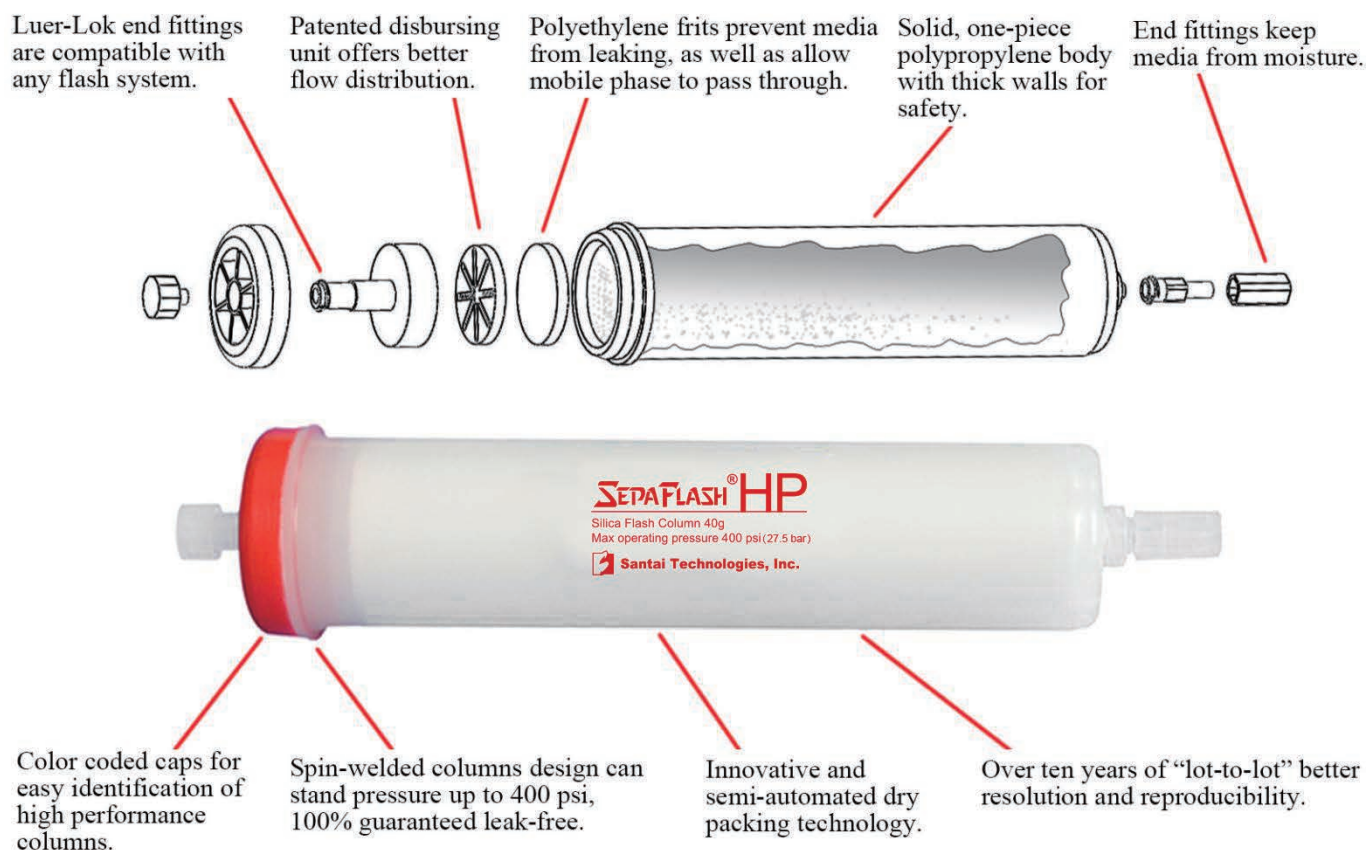
SepaFlash<sup>®</sup> columns are produced with proprietary dry packing technique for uniform packed sorbent bed with less channeling effect, tighter band and symmetrical peak profile, resulting higher resolution and reproducibility. They feature patent design with standard Luer-Lok end fittings for quick, easy connection to commercially available flash systems on the market. The quality is consistent for SepaFlash<sup>®</sup> columns for decades of years, to ensure that the chemists are able to complete the everyday purification with pleasure.

## Versatile

The HP Series columns are available from 4 gram up to 330 gram column size allowing purification from 10 milligram up to 50 grams. The enhanced product offering with high-efficiency silica gel (spherical, 20-45  $\mu\text{m}$ , 70  $\text{\AA}$ ) provides an outstanding performance without increasing the backpressure.

## Safe

Extra thick walls on The HP Series columns are pressure rated for safe operation. Spin-welded column heads ensure that the columns are able to withstand the pressure capability of modern flash systems and not leak valuable compound.



# SepaFlash® Column Overview for iLOK™ Series

SepaFlash® columns are an excellent alternative to the other columns available on the market, and you will enjoy fast, easy purification and scale-up from milligram to dozens of grams. The iLOK(R) series columns offer the following advantages:

## Reliable and Reproducible

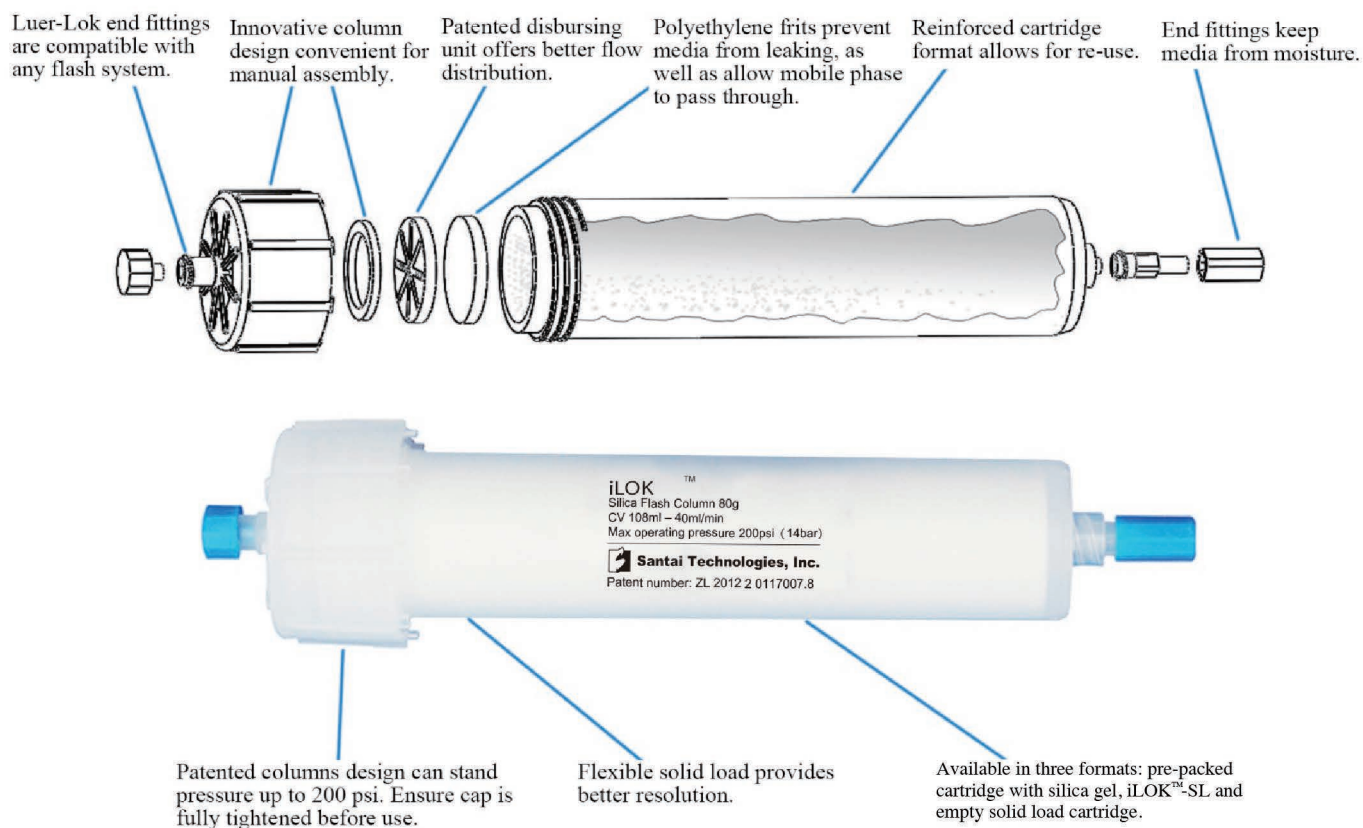
SepaFlash® iLOK™ cartridges are offered in three formats: iLOK™ pre-packed cartridge, iLOK™-SL cartridge and iLOK™ empty cartridge. iLOK™ pre-packed cartridges are produced with proprietary dry packing technique for higher resolution and reproducibility. They feature patent design with standard Lure-Lok end fittings for quick, easy connection to commercially available flash systems on the market. The quality is consistent for SepaFlash® columns for decades of years, to ensure that the chemists are able to complete the everyday purification with pleasure.

## Versatile

SepaFlash® iLOK™ cartridges are available from 4 gram up to 330 gram column size allowing purification from 10 milligram up to 33 grams. They offer users convenience for manual assembly, allowing for a flexible sample loading methods: solid loading and direct liquid injection.

## Safe

Innovative column design on iLOK series cartridge ensures safe operation under certain pressure limit. Reinforced cartridge body ensures that the column is able to withstand the pressure capability of modern flash systems and not leak valuable compound.



# Standard Series

Standard Series flash columns are machine packed with UltraPure silica gel using proprietary dry packing technique.

- UltraPure silica features tight particle size distribution, low level of fines and low trace metal content, neutral pH, controlled water content and high surface area, providing scientists the desired reproducible experimental results
- Unique, proprietary dry packing technique guarantees high resolution and reproducibility for everyday purifications.
- Improved pressure rated up to 300 psi



## UltraPure irregular silica, 40–63 $\mu\text{m}$ , 60 Å

(surface area 500 m<sup>2</sup>/g, pH 6.5–7.5, loading capacity 0.1–10%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
S-5101-0004	4 g	4 mg–0.4 g	20	15–40	105.8	12.4	300/20.7
S-5101-0012	12 g	12 mg–1.2 g	18	30–60	124.5	21.2	300/20.7
S-5101-0025	25 g	25 mg–2.5 g	12	30–60	172.7	21.3	300/20.7
S-5101-0040	40 g	40 mg–4.0 g	12	40–70	176.0	26.7	300/20.7
S-5101-0080	80 g	80 mg–8.0 g	10	50–100	246.8	30.9	200/13.8
S-5101-0120	120 g	120 mg–12 g	10	60–150	264.6	36.2	200/13.8
S-5101-0220	220 g	220 mg–22 g	6	80–220	203.7	60.1	150/10.3
S-5101-0330	330 g	330 mg–33 g	5	80–220	275.0	60.4	150/10.3
S-5101-0800	800 g	800 mg–80 g	3	100–300	382.9	78.2	100/6.9
S-5101-1600	1600 g	1.6 g–160 g	2	200–500	432.4	103.8	100/6.9
S-5101-3000	3000 g	3.0 g–300 g	1	200–500	509.5	127.5	100/6.9

- Compatible with all flash chromatography systems.

## High-efficiency irregular silica, 25–40 $\mu\text{m}$ , 60Å

(surface area 500 m<sup>2</sup>/g, pH 6.5–7.5, loading capacity 0.1–15%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
S-5102-0004	4 g	4 mg–0.6 g	20	15–30	105.8	12.4	300/20.7
S-5102-0012	12 g	12 mg–1.8 g	18	25–50	124.5	21.2	300/20.7
S-5102-0025	25 g	25 mg–3.8 g	12	25–50	172.7	21.3	300/20.7
S-5102-0040	40 g	40 mg–6.0 g	12	30–60	176.0	26.7	300/20.7
S-5102-0080	80 g	80 mg–12 g	10	40–80	246.8	30.9	200/13.8
S-5102-0120	120 g	120 mg–18 g	10	45–90	264.6	36.2	200/13.8
S-5102-0220	220 g	220 mg–33 g	6	60–120	203.7	60.1	150/10.3
S-5102-0330	330 g	330 mg–50 g	5	60–120	275.0	60.4	150/10.3

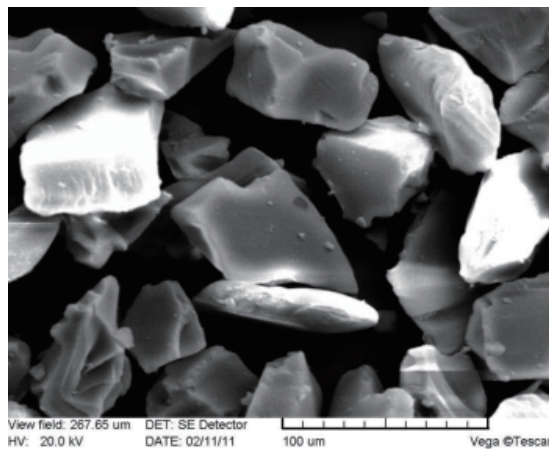
- Compatible with all flash chromatography systems.



## The characteristics for UltraPure irregular silica gel

This cost efficient material has an irregular particle shape with smooth edges, a very narrow particle size distribution and the low level of fines offered by Santai, which will optimize your separating power and save your time and money. There are two kinds of irregular silica gel available: 40-63  $\mu\text{m}$  and 25-40  $\mu\text{m}$ .

Especially, Santai further develops the stable dry packing technique for irregular 25-40  $\mu\text{m}$  silica, and the pre-packed 25-40  $\mu\text{m}$  silica cartridges will show extraordinary separation ability.



SEM picture of 40-63  $\mu\text{m}$  silica gel

## Santai' silica gel also offers these advantages over competitor's products:

### Neutral pH:

The pH of Santai's irregular silica gel is kept between 6.5–7.5. A neutral pH is needed to separate pH sensitive compounds.

### Stable water content:

Water content of silica gel affects the selectivity of the silica. The water content of Santai's irregular silica is strictly controlled between 4% - 6%.

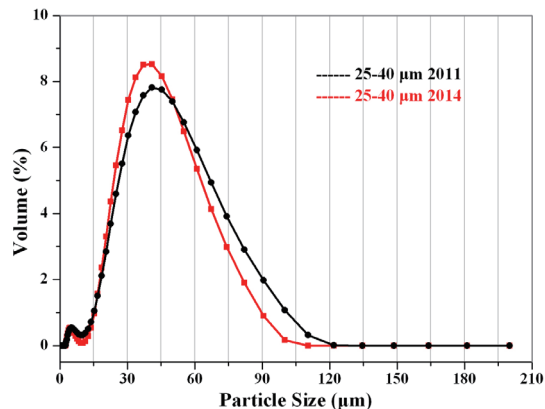
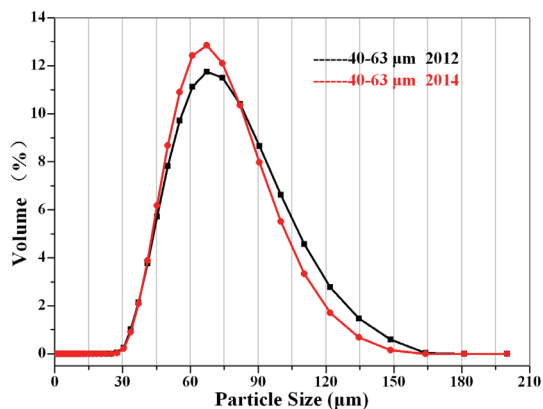
### High surface area:

Higher surface area (500  $\text{m}^2/\text{g}$  for 60  $\text{\AA}$  pore size) provides higher sample loading capacity

### Tight particle size distribution and high batch-to-batch reproducibility:

A narrower particle size distribution will give a more homogenous packing that will help in collecting more concentrated fractions and reduced solvent consumption, which will lead to cost savings. The high batch-to-batch reproducibility of particle size distribution fundamentally guarantees the excellent separation performance. Please refer to the SEM picture and particle size distribution analysis results of two batches.

## Particle size distribution of two batches for 40-63 $\mu\text{m}$ and 25-40 $\mu\text{m}$ silica gel



## More comparison data for SepaFlash® Standard Series columns

SepaFlash® flash columns offer incredible performance over competitive products due to the higher silica gel quality and innovative packing technique.

### High Reproducibility with SepaFlash® columns

#### SepaFlash® Standard Series Column 120 g

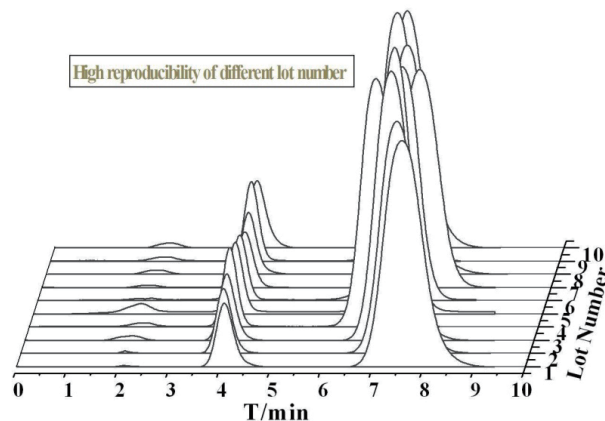
**Sample:** Acetophenone and P-Methoxyacetophenone

**Mobile Phase:** 80% hexane and 20% ethyl acetate

**Flow Rate:** 85 mL/min

**Sample Size:** 1.5 mL

**Wave Length:** 254 nm



### Better Separations with SepaFlash® columns

Santai evaluated the performance of the SepaFlash® columns comparing with other well-known brands. The results suggested SepaFlash Columns have better performance than other competing products.

#### SepaFlash® 120 g Versus Brand A 120 g

**Sample:** Acetophenone and P-Methoxyacetophenone

**Mobile Phase:** 80% hexane and 20% ethyl acetate

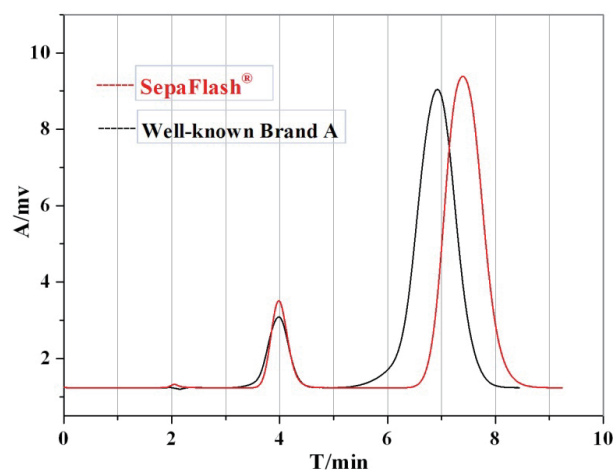
**Flow Rate:** 85 mL/min

**Sample Size:** 1.5 mL

**Wave Length:** 254 nm

#### Chromatographic Parameters:

Column Size	tR	N	Rs	T
SepaFlash® 120g	4.0 min	519	3.54	1.13
Brand A 120g	4.0 min	408	0.92	



#### SepaFlash® 330 g Versus Brand B 340 g

**Sample:** Acetophenone and P-Methoxyacetophenone

**Mobile Phase:** 80% hexane and 20% ethyl acetate

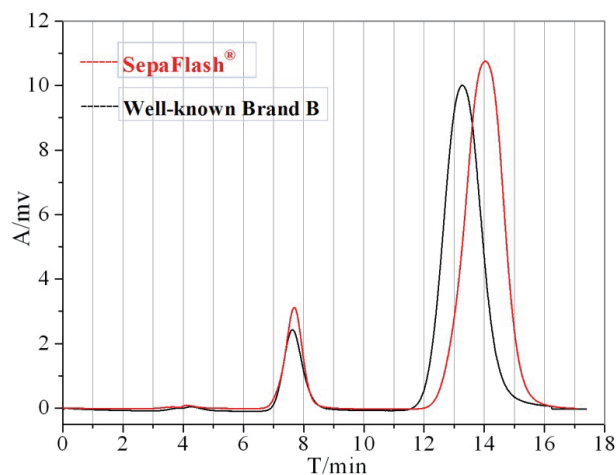
**Flow Rate:** 120 mL/min

**Sample Size:** 5 mL

**Wave Length:** 254 nm

#### Chromatographic Parameters:

Column Size	tR	N	Rs	T
SepaFlash® 330g	7.7 min	539	3.54	0.97
Brand B 340g	7.6 min	510	3.11	1.11



## NEW COLUMN SIZE – 3 kg

SepaFlash® columns are now available in a 3 kg column size which could purify up to 300 grams in a single run with the same reliability and reproducibility. The 3 kg flash columns are spin-welded and can stand pressure up to 100 psi. Universal Luer-Lok ending fittings facilitate compatibility with any flash system on the market.

- Reliable, consistent performance from proprietary packing technique
- Reinforced cartridge body with maximum operating pressure up to 100 psi
- Luer-Lok end fittings compatible with any flash system
- Faster purification runs to save time and solvent



## UltraPure irregular silica, 40–63 µm, 60 Å (NEW Product)

(surface area 500 m<sup>2</sup>/g, pH 6.5–7.5, loading capacity 0.1–10%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
S-5101-3000	3000 g	3.0 g–300 g	1	200–500	509.5	127.5	100/6.9

- Compatible with all flash chromatography systems.

## Better Separation with SepaFlash® columns

### SepaFlash® 3 kg Versus Competitor A 3 kg

**Sample:** Acetophenone and P-Methoxyacetophenone

**Mobile Phase:** 80% hexane and 20% ethyl acetate

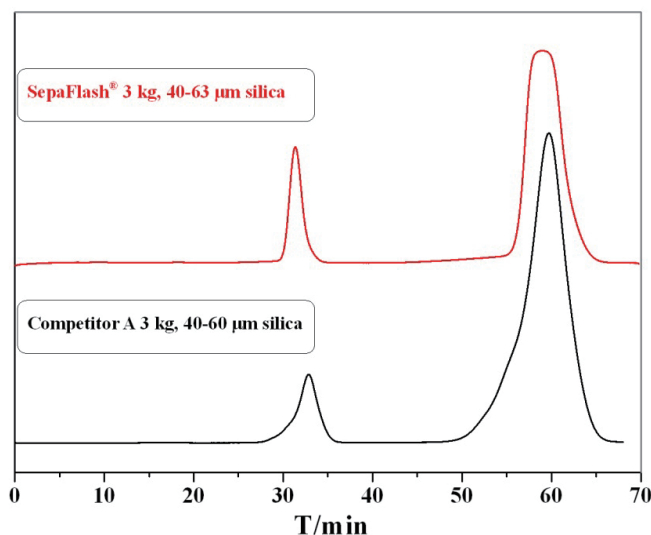
**Flow Rate:** 250 mL/min

**Sample Size:** 40 mL

**Wave Length:** 254 nm

#### Chromatographic Parameters:

Column Size	tR	N	Rs	T
SepaFlash® 3 kg	31 min	890	5.13	1.20
Competitor A 3 kg	33 min	743	4.00	0.80



## E Series

E series flash columns are manufactured with the same cartridges as the standard series (and therefore have all the same great characteristics) but are packed with economical, high-quality silica gel (40-63  $\mu\text{m}$ , 60  $\text{\AA}$ ) or 50-75  $\mu\text{m}$  alumina. Especially, the alumina flash columns are useful when the samples are sensitive and prone to degradation on silica gel. This series products are a good choice of cost saving for everyday purification.



### High-quality irregular silica, 40–63 $\mu\text{m}$ , 60 $\text{\AA}$

(surface area 500  $\text{m}^2/\text{g}$ , pH 6.5–7.5, loading capacity 0.1–10%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
S-8101-0004	4 g	4 mg–0.4 g	20	15–40	105.8	12.4	300/20.7
S-8101-0012	12 g	12 mg–1.2 g	18	30–60	124.5	21.2	300/20.7
S-8101-0025	25 g	25 mg–2.5 g	12	30–60	172.7	21.3	300/20.7
S-8101-0040	40 g	40 mg–4.0 g	12	40–70	176.0	26.7	300/20.7
S-8101-0080	80 g	80 mg–8.0 g	10	50–100	246.8	30.9	200/13.8
S-8101-0120	120 g	120 mg–12 g	10	60–150	264.6	36.2	200/13.8
S-8101-0220	220 g	220 mg–22 g	6	80–220	203.7	60.1	150/10.3
S-8101-0330	330 g	330 mg–33 g	5	80–220	275.0	60.4	150/10.3
S-8101-0800	800 g	800 mg–80 g	3	100–300	382.9	78.2	100/6.9
S-8101-1600	1600 g	1.6 g–160 g	2	200–500	432.4	103.8	100/6.9
S-8101-3000	3000 g	3.0 g–300 g	1	200–500	509.5	127.5	100/6.9

- Compatible with all flash chromatography systems.

### High-quality alumina, 50–75 $\mu\text{m}$ , 55 $\text{\AA}$

(surface area 155  $\text{m}^2/\text{g}$ , pH: acidic 3.8–4.8, neutral 6.5–7.5, basic 9.0–10.0; loading capacity 0.1–4%)

For acidic alumina, replace “N” with “A” in item number, and for basic alumina with “B”.

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
S-8601-0004-N	8 g	8 mg–0.32 g	20	10–30	105.8	12.4	300/20.7
S-8601-0012-N	24 g	24 mg–1.0 g	18	15–45	124.5	21.2	300/20.7
S-8601-0025-N	50 g	50 mg–2.0 g	12	15–45	172.7	21.3	300/20.7
S-8601-0040-N	80 g	80 mg–3.2 g	12	20–50	176.0	26.7	300/20.7
S-8601-0080-N	160 g	160 mg–6.4 g	10	30–70	246.8	30.9	200/13.8
S-8601-0120-N	240 g	240 mg–9.6 g	10	40–80	264.6	36.2	200/13.8
S-8601-0220-N	440 g	440 mg–17.6 g	6	50–120	203.7	60.1	150/10.3
S-8601-0330-N	660 g	660 mg–26.4 g	5	50–120	275.0	60.4	150/10.3
S-8601-0800-N	1600 g	1.6 g–64 g	3	100–200	382.9	78.2	100/6.9
S-8601-1600-N	3200 g	3.2 g–128 g	2	150–300	432.4	103.8	100/6.9
S-8601-3000-N	6000 g	6.0 g–240 g	1	150–300	509.5	127.5	100/6.9

- Compatible with all flash chromatography systems.

# HP Series

HP series flash columns are spin-welded and allow for higher pressure of up to 400 psi. Available adapter facilitates compatibility with any flash system on the market. This series provides Luer-Lok in and Luer-Lok out flexibility for convenient column stacking. When pre-packed with high-efficiency silica gel (irregular, 25-40  $\mu\text{m}$ , 60  $\text{\AA}$ ; spherical, 20-45  $\mu\text{m}$ , 70  $\text{\AA}$ ), this series presents an outstanding resolution over conventional flash cartridges.

- Solid, one-piece polypropylene body with thick walls for safety
- Freely choose irregular silica or spherical silica according to your personal preference
- Markedly improved resolution and higher sample loading capability
- Spherical silica provides improved performance without increasing the system backpressure



## UltraPure irregular silica, 40–63 $\mu\text{m}$ , 60 $\text{\AA}$

(surface area 500  $\text{m}^2/\text{g}$ , pH 6.5–7.5, loading capacity 0.1–10%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-5101-004	4 g	4 mg–0.4 g	20	15–40	113.8	12.4	400/27.5
SW-5101-012	12 g	12 mg–1.2 g	18	30–60	134.8	21.4	400/27.5
SW-5101-025	25 g	25 mg–2.5 g	12	30–60	184.0	21.4	400/27.5
SW-5101-040	40 g	40 mg–4.0 g	12	40–70	184.4	26.7	400/27.5
SW-5101-080	80 g	80 mg–8.0 g	10	50–100	257.4	31.2	350/24.0
SW-5101-120	120 g	120 mg–12 g	10	60–150	261.5	38.6	300/20.7
SW-5101-220	220 g	220 mg–22 g	6	80–220	223.5	61.4	300/20.7
SW-5101-330	330 g	330 mg–33 g	5	80–220	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.

## High-efficiency irregular silica, 25–40 $\mu\text{m}$ , 60 $\text{\AA}$

(surface area 500  $\text{m}^2/\text{g}$ , pH 6.5–7.5, loading capacity 0.1–15%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-2101-004-SP	4 g	4 mg–0.4 g	20	15–40	113.8	12.4	400/27.5
SW-2101-012-SP	12 g	12 mg–1.2 g	18	30–60	134.8	21.4	400/27.5
SW-2101-025-SP	25 g	25 mg–2.5 g	12	30–60	184.0	21.4	400/27.5
SW-2101-040-SP	40 g	40 mg–4.0 g	12	40–70	184.4	26.7	400/27.5
SW-2101-080-SP	80 g	80 mg–8.0 g	10	50–100	257.4	31.2	350/24.0
SW-2101-120-SP	120 g	120 mg–12 g	10	60–150	261.5	38.6	300/20.7
SW-2101-220-SP	220 g	220 mg–22 g	6	80–220	223.5	61.4	300/20.7
SW-2101-330-SP	330 g	330 mg–33 g	5	80–220	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.

## UltraPure spherical silica, 40–75 µm, 70 Å

(surface area 500 m<sup>2</sup>/g, pH 6.0–8.0, loading capacity 0.1–10%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-5102-004	4 g	4 mg–0.6 g	20	15–30	113.8	12.4	400/27.5
SW-5102-012	12 g	12 mg–1.8 g	18	25–50	134.8	21.4	400/27.5
SW-5102-025	25 g	25 mg–3.8 g	12	25–50	184.0	21.4	400/27.5
SW-5102-040	40 g	40 mg–6.0 g	12	30–60	184.4	26.7	400/27.5
SW-5102-080	80 g	80 mg–12 g	10	40–80	257.4	31.2	350/24.0
SW-5102-120	120 g	120 mg–18 g	10	45–90	261.5	38.6	300/20.7
SW-5102-220	220 g	220 mg–33 g	6	60–120	223.5	61.4	300/20.7
SW-5102-330	330 g	330 mg–50 g	5	60–120	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.

## High-efficiency spherical silica, 20–45 µm, 70 Å

(surface area 500 m<sup>2</sup>/g, pH 6.0–8.0, loading capacity 0.1–15%)

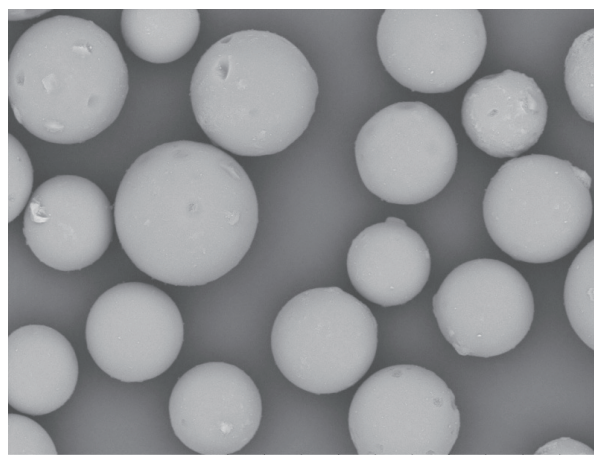
Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-2102-004-SP	4 g	4 mg–0.6 g	20	15–30	113.8	12.4	400/27.5
SW-2102-012-SP	12 g	12 mg–1.8 g	18	25–50	134.8	21.4	400/27.5
SW-2102-025-SP	25 g	25 mg–3.8 g	12	25–50	184.0	21.4	400/27.5
SW-2102-040-SP	40 g	40 mg–6.0 g	12	30–60	184.4	26.7	400/27.5
SW-2102-080-SP	80 g	80 mg–12 g	10	40–80	257.4	31.2	350/24.0
SW-2102-120-SP	120 g	120 mg–18 g	10	45–90	261.5	38.6	300/20.7
SW-2102-220-SP	220 g	220 mg–33 g	6	60–120	223.5	61.4	300/20.7
SW-2102-330-SP	330 g	330 mg–50 g	5	60–120	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.

## The benefits of spherical silica gel

For spherical silica gel, strict quality controls from raw material to finished product ensures high lot-to-lot reproducibility and tightly controlled specifications.

- Consistency, reliability, reproducibility
- No contamination, lower backpressure
- Superior resolution
- Symmetrical peaks with no tailing
- Higher sample loading capacity



NL D8.1 x1.0k 100 µm

SEM picture of 20–45 µm spherical silica gel

## SepaFlash® column stacking to improve resolution of normal phase flash chromatography

Purification of compounds that are difficult to separate by flash chromatography ( $\Delta R_f \leq 0.2$  between spots on TLC) often results in additional steps such as subsequent purification by preparative scale HPLC. It is possible to reduce the amount of additional work required for purification by simply stacking several prepacked SepaFlash® columns end to end on a flash chromatography system.



In liquid chromatography, chemical species are separated on the basis of their difference in velocity as they move through the column. Increasing column length can significantly increase resolution. By stacking columns end to end the length to diameter (L/D) ratio is increased so that no major changes to the media and solvent system are necessary. Often this increased L/D ratio is sufficient to provide successful separation for complex mixtures which cannot be realized by single column due to the close retention time of the components in the mixture. The data shown below illustrates the linear relationship between peak-to-peak resolution and number of columns stacked

**Columns:** SepaFlash® flash columns, 25 g  
**Item number:** SW-5102-025  
**Sample:** Acetophenone and P-Methoxyacetophenone

**Mobile Phase:** 80% hexane and 20% ethyl acetate

**Flow Rate:** 20 mL/min

**Sample Size:** One 25g                    0.25 mL  
                   Two 25g stacked        0.50 mL  
                   Three 25g stacked        0.75 mL  
                   Four 25g stacked        1.00 mL  
                   Five 25g stacked        1.25 mL

**Wave Length:** 254 nm

### Observed Chromatographic Parameters:

Column Size	tR1 (Peak 1)	tR2 (Peak 2)	N	Rs	T
One 25 g	3.7 min	6.5 min	1075	4.42	1.11
Two 25 g stacked	7.3 min	13.1 min	1770	6.02	1.10
Three 25 g stacked	11.0 min	19.8 min	1832	6.41	1.23
Four 25 g stacked	15.1 min	27.0 min	1902	6.51	1.20
Five 25 g stacked	19.0 min	34.2 min	2183	7.13	1.29

Table 1: Experimental parameters and results

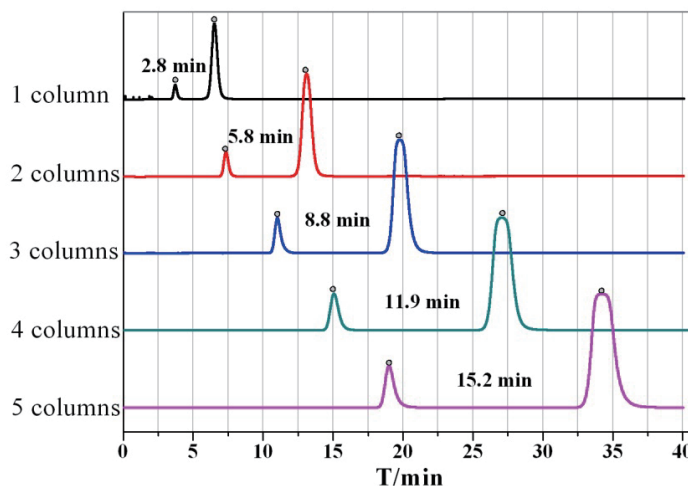
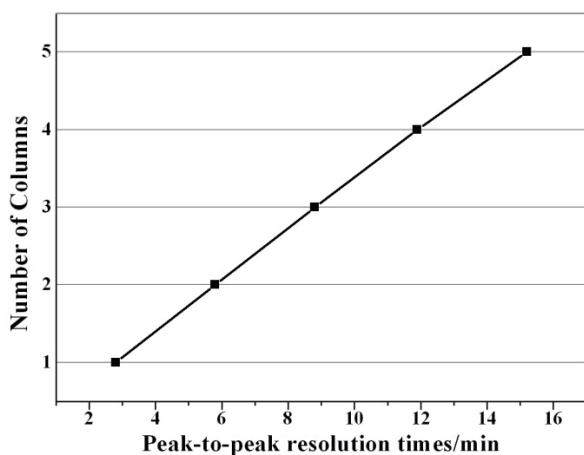


Figure 1: Linear relationship between number of stacked columns and peak-to-peak resolution times

Figure 2: Peak-to-peak resolution of multiple stacked 25 g columns

## HP Series - High-capacity spherical silica gel

### The Highest Purification Performance Available

HP series flash columns are precisely packed with high-capacity silica gel, and deliver the highest purification performance. The high-capacity spherical silica has 40% higher surface area, doubling the sample loading capacity when compared with the silica of lower surface area.

- High-capacity silica with 40% more surface area
- Higher sample loading capacity enables the user with smaller and cheaper cartridges for sample purification
- Smaller cartridges used in purification brings with less solvent consumption and the resulting less contamination to the environment
- Spherical silica could offer higher resolution over irregular silica



### High-capacity spherical silica, 25 $\mu\text{m}$ , 50 $\text{\AA}$ (NEW Product)

(surface area 700  $\text{m}^2/\text{g}$ , pH 5.0–8.0, loading capacity 0.1–30%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-2102-004-SP(H)	4 g	4 mg–1.2 g	20	15–30	113.8	12.4	400/27.5
SW-2102-012-SP(H)	12 g	12 mg–3.6 g	18	25–50	134.8	21.4	400/27.5
SW-2102-025-SP(H)	25 g	25 mg–7.5 g	12	25–50	184.0	21.4	400/27.5
SW-2102-040-SP(H)	40 g	40 mg–12 g	12	30–60	184.4	26.7	400/27.5
SW-2102-080-SP(H)	80 g	80 mg–24 g	10	40–80	257.4	31.2	350/24.0
SW-2102-120-SP(H)	120 g	120 mg–36 g	10	45–90	261.5	38.6	300/20.7
SW-2102-220-SP(H)	220 g	220 mg–66 g	6	60–120	223.5	61.4	300/20.7
SW-2102-330-SP(H)	330 g	330 mg–99 g	5	60–120	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.

### High-capacity spherical silica, 15 $\mu\text{m}$ , 50 $\text{\AA}$ (NEW Product)

(surface area 700  $\text{m}^2/\text{g}$ , pH 5.0–8.0, loading capacity 0.1–30%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-2103-004-SP(H)	4 g	4 mg–1.2 g	20	10–15	113.8	12.4	400/27.5
SW-2103-012-SP(H)	12 g	12 mg–3.6 g	18	15–20	134.8	21.4	400/27.5
SW-2103-025-SP(H)	25 g	25 mg–7.5 g	12	15–20	184.0	21.4	400/27.5
SW-2103-040-SP(H)	40 g	40 mg–12 g	12	20–30	184.4	26.7	400/27.5
SW-2103-080-SP(H)	80 g	80 mg–24 g	10	30–40	257.4	31.2	350/24.0
SW-2103-120-SP(H)	120 g	120 mg–36 g	10	35–45	261.5	38.6	300/20.7
SW-2103-220-SP(H)	220 g	220 mg–66 g	6	50–65	223.5	61.4	300/20.7
SW-2103-330-SP(H)	330 g	330 mg–99 g	5	50–65	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.



## More comparison data for SepaFlash® HP Series columns

Cartridges pre-packed with high-capacity silica gel (700 m<sup>2</sup>/g for 50 Å pore size) deliver the highest purification performance available. The high-capacity 25 µm or 15 µm spherical silica has 40% higher surface area, doubling the sample loading capacity when compared with the silica of lower surface area. Santai evaluated the performance of SepaFlash® HP Series columns while comparing with other competing products. The results suggested SepaFlash Columns have better performance than other competing products.

### Better Resolutions with SepaFlash® columns

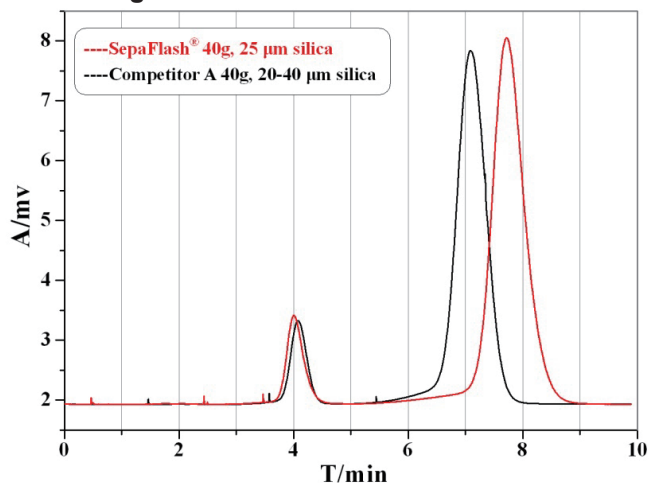
#### SepaFlash® 40g Versus Competitor A 40g

**Sample:** Acetophenone and P-Methoxyacetophenone

**Mobile Phase:** 80% hexane and 20% ethyl acetate

**Sample Size:** 0.35 mL

**Wave Length:** 254 nm



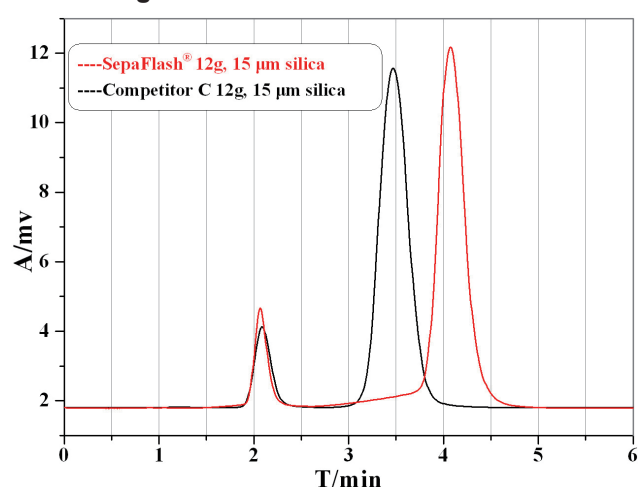
#### SepaFlash® 12g Versus Competitor C 12g

**Sample:** Acetophenone and P-Methoxyacetophenone

**Mobile Phase:** 80% hexane and 20% ethyl acetate

**Sample Size:** 0.20 mL

**Wave Length:** 254 nm



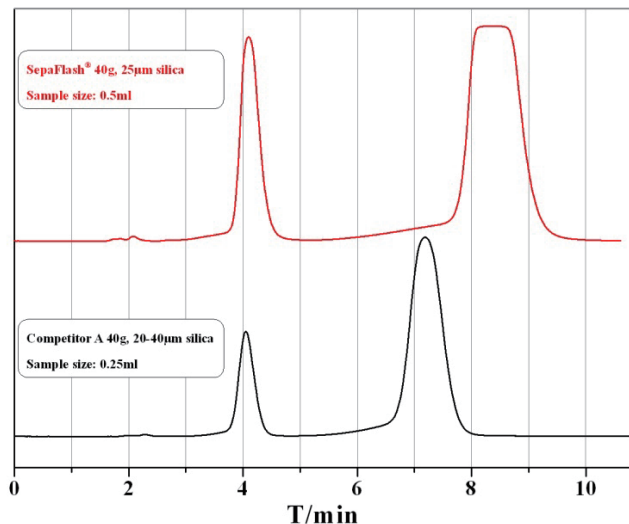
### Double Sample Loading Capacity with SepaFlash® columns

#### SepaFlash® 40g Versus Competitor A 40g

**Sample:** Acetophenone and P-Methoxyacetophenone  
30mg/mL

**Mobile Phase:** 80% hexane and 20% ethyl acetate

**Wave Length:** 254 nm

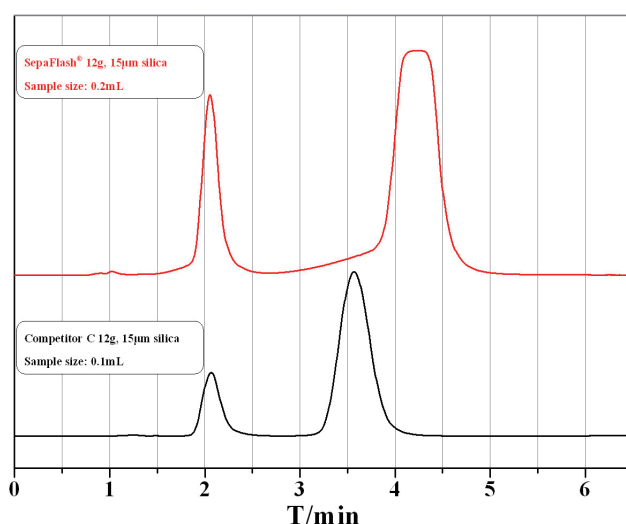


#### SepaFlash® 12g Versus Competitor C 12g

**Sample:** Acetophenone and P-Methoxyacetophenone  
30mg/mL

**Mobile Phase:** 80% hexane and 20% ethyl acetate

**Wave Length:** 254 nm



## Bonded Series – 20 kinds of bonded silica

Bonded series flash columns are manufactured with the same cartridges as the HP series but are packed with UltraPure, high-quality or high-efficiency bonded silica. This series products could offer a wide variety of sorbents to better satisfy the requirements for different users.



- Available in a wide variety of specifications
- Improved pressure rated up to 400 psi
- Reusability: 20 runs (may differ upon different situations)
- Economical substitute for preparative HPLC
- Meet the specific requirements for a variety of sample purifications

Irregular Family	<ul style="list-style-type: none"> <li>● Irregular C18, 40–63 <math>\mu\text{m}</math>, 60 <math>\text{\AA}</math></li> <li>● Irregular C18, 40–63 <math>\mu\text{m}</math>, 90 <math>\text{\AA}</math></li> <li>● Irregular NH<sub>2</sub>, 40–63 <math>\mu\text{m}</math>, 60 <math>\text{\AA}</math></li> <li>● Irregular SAX, 40–63 <math>\mu\text{m}</math>, 60 <math>\text{\AA}</math></li> <li>● Irregular SCX, 40–63 <math>\mu\text{m}</math>, 60 <math>\text{\AA}</math></li> </ul>
Hemispherical Family	<ul style="list-style-type: none"> <li>● Hemispherical C18, 50 <math>\mu\text{m}</math>, 90 <math>\text{\AA}</math></li> </ul>
Spherical Family	<ul style="list-style-type: none"> <li>● Spherical C18, 40–60 <math>\mu\text{m}</math>, 120 <math>\text{\AA}</math></li> <li>● Spherical C18, 30–50 <math>\mu\text{m}</math>, 120 <math>\text{\AA}</math></li> <li>● Spherical C18, 40–75 <math>\mu\text{m}</math>, 100 <math>\text{\AA}</math></li> <li>● Spherical C18, 20–45 <math>\mu\text{m}</math>, 100 <math>\text{\AA}</math></li> <li>● Spherical C18(AQ), 20–45 <math>\mu\text{m}</math>, 100 <math>\text{\AA}</math></li> <li>● Spherical C18, 15 <math>\mu\text{m}</math>, 100 <math>\text{\AA}</math></li> <li>● Spherical CN, 20–45 <math>\mu\text{m}</math>, 100 <math>\text{\AA}</math></li> <li>● Spherical C4, 20–45 <math>\mu\text{m}</math>, 100 <math>\text{\AA}</math></li> <li>● Spherical ARG, 20–45 <math>\mu\text{m}</math>, 100 <math>\text{\AA}</math></li> <li>● Spherical C8, 20–45 <math>\mu\text{m}</math>, 100 <math>\text{\AA}</math></li> <li>● Spherical C8(AQ), 20–45 <math>\mu\text{m}</math>, 100 <math>\text{\AA}</math></li> <li>● Spherical Diol, 20–45 <math>\mu\text{m}</math>, 100 <math>\text{\AA}</math></li> <li>● Spherical Phenyl, 20–45 <math>\mu\text{m}</math>, 100 <math>\text{\AA}</math></li> <li>● Spherical Phenyl-Hexyl, 20–45 <math>\mu\text{m}</math>, 100 <math>\text{\AA}</math></li> </ul>
Notes: The detailed specification please sees the ordering information.	

### UltraPure irregular C18, 40-63 $\mu\text{m}$ , 60 $\text{\AA}$

(carbon content 17%, end-capping, surface area 500  $\text{m}^2/\text{g}$ , loading capacity 0.1–2%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-5201-004-IR	5.9 g	5.9 mg–118 mg	2	10–20	113.8	12.4	400/27.5
SW-5201-012-IR	23 g	23mg–0.46g	1	15–30	134.8	21.4	400/27.5
SW-5201-025-IR	38 g	38 mg–0.76 g	1	15–30	184.0	21.4	400/27.5
SW-5201-040-IR	55 g	55 mg–1.1 g	1	20–40	184.4	26.7	400/27.5
SW-5201-080-IR	122 g	122 mg–2.5 g	1	30–60	257.4	31.2	350/24.0
SW-5201-120-IR	180 g	180 mg–3.6 g	1	40–80	261.5	38.6	300/20.7
SW-5201-220-IR	340 g	340 mg–6.8 g	1	50–100	223.5	61.4	300/20.7
SW-5201-330-IR	475 g	475 mg–9.5 g	1	50–100	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.

## UltraPure irregular C18, 40-63 µm, 90 Å

(carbon content 15%, end-capping, surface area 400 m<sup>2</sup>/g, loading capacity 0.1–2%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-5211-004-IR	5.2 g	5.2 mg–104 mg	2	10–20	113.8	12.4	400/27.5
SW-5211-012-IR	20 g	20 mg–0.40 g	1	15–30	134.8	21.4	400/27.5
SW-5211-025-IR	33 g	33 mg–0.66 g	1	15–30	184.0	21.4	400/27.5
SW-5211-040-IR	48 g	48 mg–0.96 g	1	20–40	184.4	26.7	400/27.5
SW-5211-080-IR	105 g	105 mg–2.1 g	1	30–60	257.4	31.2	350/24.0
SW-5211-120-IR	155 g	155 mg–3.1 g	1	40–80	261.5	38.6	300/20.7
SW-5211-220-IR	295 g	295 mg–5.9 g	1	50–100	223.5	61.4	300/20.7
SW-5211-330-IR	420 g	420 mg–8.4 g	1	50–100	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.

## UltraPure hemispherical C18, 50 µm, 90 Å

(carbon content 17%, end-capping, surface area 400 m<sup>2</sup>/g, loading capacity 0.1–2%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-5211-004-SS	5 g	5 mg–100 mg	2	10–20	113.8	12.4	400/27.5
SW-5211-012-SS	19 g	19 mg–0.38 g	1	15–30	134.8	21.4	400/27.5
SW-5211-025-SS	32 g	32 mg–0.64 g	1	15–30	184.0	21.4	400/27.5
SW-5211-040-SS	46 g	46 mg–0.92 g	1	20–40	184.4	26.7	400/27.5
SW-5211-080-SS	100 g	100 mg–2.0 g	1	30–60	257.4	31.2	350/24.0
SW-5211-120-SS	150 g	150 mg–3.0 g	1	40–80	261.5	38.6	300/20.7
SW-5211-220-SS	280 g	280 mg–5.6 g	1	50–100	223.5	61.4	300/20.7
SW-5211-330-SS	395 g	395 mg–7.9 g	1	50–100	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.

## UltraPure spherical C18, 40-60 µm, 120 Å

(carbon content 17%, end-capping, surface area 300 m<sup>2</sup>/g, loading capacity 0.1–1.5%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-5231-004-SP	4.5 g	4.5 mg–68 mg	2	10–20	113.8	12.4	400/27.5
SW-5231-012-SP	18 g	18 mg–0.27 g	1	15–30	134.8	21.4	400/27.5
SW-5231-025-SP	28 g	28 mg–0.42 g	1	15–30	184.0	21.4	400/27.5
SW-5231-040-SP	40 g	40 mg–0.60 g	1	20–40	184.4	26.7	400/27.5
SW-5231-080-SP	90 g	90 mg–1.35 g	1	30–60	257.4	31.2	350/24.0
SW-5231-120-SP	130 g	130 mg–1.95 g	1	40–80	261.5	38.6	300/20.7
SW-5231-220-SP	245 g	245 mg–3.68 g	1	50–100	223.5	61.4	300/20.7
SW-5231-330-SP	350 g	350 mg–5.25 g	1	50–100	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.

## High-efficiency spherical C18, 30-50 µm, 120 Å

(carbon content 17%, end-capping, surface area 300 m<sup>2</sup>/g, loading capacity 0.1–2%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-5232-004-SP	4.3 g	4.3 mg–86 mg	2	5–15	113.8	12.4	400/27.5
SW-5232-012-SP	16 g	16 mg–0.32 g	1	10–25	134.8	21.4	400/27.5
SW-5232-025-SP	26 g	26 mg–0.52 g	1	10–25	184.0	21.4	400/27.5
SW-5232-040-SP	39 g	39 mg–0.78 g	1	15–30	184.4	26.7	400/27.5
SW-5232-080-SP	85 g	85 mg–1.7 g	1	20–50	257.4	31.2	350/24.0
SW-5232-120-SP	125 g	125 mg–2.5 g	1	30–60	261.5	38.6	300/20.7
SW-5232-220-SP	240 g	240 mg–4.8 g	1	40–80	223.5	61.4	300/20.7
SW-5232-330-SP	335 g	335 mg–6.7 g	1	40–80	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.

## UltraPure spherical C18, 40-75 µm, 100 Å

(carbon content 17%, end-capping, surface area 300 m<sup>2</sup>/g, loading capacity 0.1–1.5%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-5221-004-SP	4.6 g	4.6 mg–69 mg	2	10–20	113.8	12.4	400/27.5
SW-5221-012-SP	18 g	18 mg–0.27 g	1	15–30	134.8	21.4	400/27.5
SW-5221-025-SP	30 g	30 mg–0.45 g	1	15–30	184.0	21.4	400/27.5
SW-5221-040-SP	43 g	43 mg–0.65 g	1	20–40	184.4	26.7	400/27.5
SW-5221-080-SP	95 g	95 mg–1.43 g	1	30–60	257.4	31.2	350/24.0
SW-5221-120-SP	142 g	142 mg–2.13 g	1	40–80	261.5	38.6	300/20.7
SW-5221-220-SP	265 g	265 mg–3.98 g	1	50–100	223.5	61.4	300/20.7
SW-5221-330-SP	385 g	385 mg–5.78 g	1	50–100	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.

## High-efficiency spherical C18, 20-45 µm, 100 Å

(carbon content 17%, end-capping, surface area 320 m<sup>2</sup>/g, loading capacity 0.1–2%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-5222-004-SP	5.4 g	5.4 mg–108 mg	2	5–15	113.8	12.4	400/27.5
SW-5222-012-SP	20 g	20 mg–0.40 g	1	10–25	134.8	21.4	400/27.5
SW-5222-025-SP	33 g	33 mg–0.66 g	1	10–25	184.0	21.4	400/27.5
SW-5222-040-SP	48 g	48 mg–0.96 g	1	15–30	184.4	26.7	400/27.5
SW-5222-080-SP	105 g	105 mg–2.1 g	1	20–50	257.4	31.2	350/24.0
SW-5222-120-SP	155 g	155 mg–3.1 g	1	30–60	261.5	38.6	300/20.7
SW-5222-220-SP	300 g	300 mg–6.0 g	1	40–80	223.5	61.4	300/20.7
SW-5222-330-SP	420 g	420 mg–8.4 g	1	40–80	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.

## High-efficiency spherical C18, 15 µm, 100 Å

(carbon content 17%, end-capping, surface area 320 m<sup>2</sup>/g, loading capacity 0.1–2%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-5223-004-SP	5.4 g	5.4 mg–108 mg	2	5–15	113.8	12.4	400/27.5
SW-5223-012-SP	20 g	20 mg–0.40 g	1	10–25	134.8	21.4	400/27.5
SW-5223-025-SP	33 g	33 mg–0.66 g	1	10–25	184.0	21.4	400/27.5
SW-5223-040-SP	48 g	48 mg–0.96 g	1	15–30	184.4	26.7	400/27.5
SW-5223-080-SP	105 g	105 mg–2.1 g	1	20–50	257.4	31.2	350/24.0
SW-5223-120-SP	155 g	155 mg–3.1 g	1	30–60	261.5	38.6	300/20.7
SW-5223-220-SP	290 g	290 mg–5.8 g	1	40–80	223.5	61.4	300/20.7
SW-5223-330-SP	410 g	410 mg–8.2 g	1	40–80	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.

## High-efficiency spherical CN, 20-45 µm, 100 Å

(carbon content 5.5%, end-capping, surface area 320 m<sup>2</sup>/g, loading capacity 0.1–2%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-5322-004-SP	5.4 g	5.4 mg–108 mg	2	5–15	113.8	12.4	400/27.5
SW-5322-012-SP	20 g	20 mg–0.40 g	1	10–25	134.8	21.4	400/27.5
SW-5322-025-SP	33 g	33 mg–0.66 g	1	10–25	184.0	21.4	400/27.5
SW-5322-040-SP	48 g	48 mg–0.96 g	1	15–30	184.4	26.7	400/27.5
SW-5322-080-SP	105 g	105 mg–2.1 g	1	20–50	257.4	31.2	350/24.0
SW-5322-120-SP	155 g	155 mg–3.1 g	1	30–60	261.5	38.6	300/20.7
SW-5322-220-SP	300 g	300 mg–6.0 g	1	40–80	223.5	61.4	300/20.7
SW-5322-330-SP	420 g	420 mg–8.4 g	1	40–80	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.

## High-efficiency spherical C4, 20-45 µm, 100 Å

(carbon content 5.8%, end-capping, surface area 320 m<sup>2</sup>/g, loading capacity 0.1–2%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-5422-004-SP	5.4 g	5.4 mg–108 mg	2	5–15	113.8	12.4	400/27.5
SW-5422-012-SP	20 g	20 mg–0.40 g	1	10–25	134.8	21.4	400/27.5
SW-5422-025-SP	33 g	33 mg–0.66 g	1	10–25	184.0	21.4	400/27.5
SW-5422-040-SP	48 g	48 mg–0.96 g	1	15–30	184.4	26.7	400/27.5
SW-5422-080-SP	105 g	105 mg–2.1 g	1	20–50	257.4	31.2	350/24.0
SW-5422-120-SP	155 g	155 mg–3.1 g	1	30–60	261.5	38.6	300/20.7
SW-5422-220-SP	300 g	300 mg–6.0 g	1	40–80	223.5	61.4	300/20.7
SW-5422-330-SP	420 g	420 mg–8.4 g	1	40–80	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.

## High-efficiency spherical C8, 20-45 $\mu\text{m}$ , 100 $\text{\AA}$

(carbon content 7%, end-capping, surface area 320  $\text{m}^2/\text{g}$ , loading capacity 0.1–2%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-5822-004-SP	5.4 g	5.4 mg–108 mg	2	5–15	113.8	12.4	400/27.5
SW-5822-012-SP	20 g	20 mg–0.40 g	1	10–25	134.8	21.4	400/27.5
SW-5822-025-SP	33 g	33 mg–0.66 g	1	10–25	184.0	21.4	400/27.5
SW-5822-040-SP	48 g	48 mg–0.96 g	1	15–30	184.4	26.7	400/27.5
SW-5822-080-SP	105 g	105 mg–2.1 g	1	20–50	257.4	31.2	350/24.0
SW-5822-120-SP	155 g	155 mg–3.1 g	1	30–60	261.5	38.6	300/20.7
SW-5822-220-SP	300 g	300 mg–6.0 g	1	40–80	223.5	61.4	300/20.7
SW-5822-330-SP	420 g	420 mg–8.4 g	1	40–80	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.

## High-efficiency spherical Diol, 20-45 $\mu\text{m}$ , 100 $\text{\AA}$

(carbon content 5%, end-capping, surface area 320  $\text{m}^2/\text{g}$ , loading capacity 0.1–2%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-5922-004-SP	5.4 g	5.4 mg–108 mg	2	5–15	113.8	12.4	400/27.5
SW-5922-012-SP	20 g	20 mg–0.40 g	1	10–25	134.8	21.4	400/27.5
SW-5922-025-SP	33 g	33 mg–0.66 g	1	10–25	184.0	21.4	400/27.5
SW-5922-040-SP	48 g	48 mg–0.96 g	1	15–30	184.4	26.7	400/27.5
SW-5922-080-SP	105 g	105 mg–2.1 g	1	20–50	257.4	31.2	350/24.0
SW-5922-120-SP	155 g	155 mg–3.1 g	1	30–60	261.5	38.6	300/20.7
SW-5922-220-SP	300 g	300 mg–6.0 g	1	40–80	223.5	61.4	300/20.7
SW-5922-330-SP	420 g	420 mg–8.4 g	1	40–80	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.

## UltraPure irregular $\text{NH}_2$ , 40-63 $\mu\text{m}$ , 60 $\text{\AA}$

(amino content 1.3 mmol/g, end-capping, surface area 500  $\text{m}^2/\text{g}$ , loading capacity 0.1–2%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-5501-004-IR	5.9 g	5.9 mg–118 mg	2	10–20	113.8	12.4	400/27.5
SW-5501-012-IR	23 g	23 mg–0.46 g	1	15–30	134.8	21.4	400/27.5
SW-5501-025-IR	38 g	38 mg–0.76 g	1	15–30	184.0	21.4	400/27.5
SW-5501-040-IR	55 g	55 mg–1.1 g	1	20–40	184.4	26.7	400/27.5
SW-5501-080-IR	122 g	122 mg–2.5 g	1	30–60	257.4	31.2	350/24.0
SW-5501-120-IR	180 g	180 mg–3.6 g	1	40–80	261.5	38.6	300/20.7
SW-5501-220-IR	340 g	340 mg–6.8 g	1	50–100	223.5	61.4	300/20.7
SW-5501-330-IR	475 g	475 mg–9.5 g	1	50–100	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.

## UltraPure irregular SAX, 40-63 $\mu\text{m}$ , 60 $\text{\AA}$

(carbon content 8%, surface area 500  $\text{m}^2/\text{g}$ , ion-exchange capacity  $\leq 0.26$  meq/g)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-5001-004-IR	5.9 g	$\leq 1.53$ meq	2	10–20	113.8	12.4	400/27.5
SW-5001-012-IR	23 g	$\leq 5.98$ meq	1	15–30	134.8	21.4	400/27.5
SW-5001-025-IR	38 g	$\leq 9.88$ meq	1	15–30	184.0	21.4	400/27.5
SW-5001-040-IR	55 g	$\leq 14.30$ meq	1	20–40	184.4	26.7	400/27.5
SW-5001-080-IR	122 g	$\leq 31.72$ meq	1	30–60	257.4	31.2	350/24.0
SW-5001-120-IR	180 g	$\leq 46.80$ meq	1	40–80	261.5	38.6	300/20.7
SW-5001-220-IR	340 g	$\leq 88.40$ meq	1	50–100	223.5	61.4	300/20.7
SW-5001-330-IR	475 g	$\leq 123.50$ meq	1	50–100	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.

## UltraPure irregular SCX, 40-63 $\mu\text{m}$ , 60 $\text{\AA}$

(carbon content 10%, surface area 500  $\text{m}^2/\text{g}$ , ion-exchange capacity  $\leq 0.34$  meq/g)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-5701-004-IR	5.9 g	$\leq 2.01$ meq	2	10–20	113.8	12.4	400/27.5
SW-5701-012-IR	23 g	$\leq 7.82$ meq	1	15–30	134.8	21.4	400/27.5
SW-5701-025-IR	38 g	$\leq 12.92$ meq	1	15–30	184.0	21.4	400/27.5
SW-5701-040-IR	55 g	$\leq 18.70$ meq	1	20–40	184.4	26.7	400/27.5
SW-5701-080-IR	122 g	$\leq 41.48$ meq	1	30–60	257.4	31.2	350/24.0
SW-5701-120-IR	180 g	$\leq 61.20$ meq	1	40–80	261.5	38.6	300/20.7
SW-5701-220-IR	340 g	$\leq 115.60$ meq	1	50–100	223.5	61.4	300/20.7
SW-5701-330-IR	475 g	$\leq 161.50$ meq	1	50–100	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.

## **NEW!** High-efficiency spherical ARG, 20-45 $\mu\text{m}$ , 100 $\text{\AA}$

(carbon content 8%, surface area 320  $\text{m}^2/\text{g}$ , loading capacity 0.1-2%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-5622-004-SP	5.4 g	5.4 mg–108 mg	2	5–15	113.8	12.4	400/27.5
SW-5622-012-SP	20 g	20 mg–0.40 g	1	10–25	134.8	21.4	400/27.5
SW-5622-025-SP	33 g	33 mg–0.66 g	1	10–25	184.0	21.4	400/27.5
SW-5622-040-SP	48 g	48 mg–0.96 g	1	15–30	184.4	26.7	400/27.5
SW-5622-080-SP	105 g	105 mg–2.1 g	1	20–50	257.4	31.2	350/24.0
SW-5622-120-SP	155 g	155 mg–3.1 g	1	30–60	261.5	38.6	300/20.7
SW-5622-220-SP	300 g	300 mg–6.0 g	1	40–80	223.5	61.4	300/20.7
SW-5622-330-SP	420 g	420 mg–8.4 g	1	40–80	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.

## NEW! High-efficiency spherical C18(AQ), 20-45 $\mu\text{m}$ , 100 Å

(carbon content 10%, end-capping, surface area 320 m<sup>2</sup>/g, loading capacity 0.1–2%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-5222-004-SP(AQ)	5.4 g	5.4 mg–108 mg	2	5–15	113.8	12.4	400/27.5
SW-5222-012-SP(AQ)	20 g	20 mg–0.40 g	1	10–25	134.8	21.4	400/27.5
SW-5222-025-SP(AQ)	33 g	33 mg–0.66 g	1	10–25	184.0	21.4	400/27.5
SW-5222-040-SP(AQ)	48 g	48 mg–0.96 g	1	15–30	184.4	26.7	400/27.5
SW-5222-080-SP(AQ)	105 g	105 mg–2.1 g	1	20–50	257.4	31.2	350/24.0
SW-5222-120-SP(AQ)	155 g	155 mg–3.1 g	1	30–60	261.5	38.6	300/20.7
SW-5222-220-SP(AQ)	300 g	300 mg–6.0 g	1	40–80	223.5	61.4	300/20.7
SW-5222-330-SP(AQ)	420 g	420 mg–8.4 g	1	40–80	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.

## NEW! High-efficiency spherical C8(AQ), 20-45 $\mu\text{m}$ , 100 Å

(carbon content 7%, end-capping, surface area 320 m<sup>2</sup>/g, loading capacity 0.1–2%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-5822-004-SP(AQ)	5.4 g	5.4 mg–108 mg	2	5–15	113.8	12.4	400/27.5
SW-5822-012-SP(AQ)	20 g	20 mg–0.40 g	1	10–25	134.8	21.4	400/27.5
SW-5822-025-SP(AQ)	33 g	33 mg–0.66 g	1	10–25	184.0	21.4	400/27.5
SW-5822-040-SP(AQ)	48 g	48 mg–0.96 g	1	15–30	184.4	26.7	400/27.5
SW-5822-080-SP(AQ)	105 g	105 mg–2.1 g	1	20–50	257.4	31.2	350/24.0
SW-5822-120-SP(AQ)	155 g	155 mg–3.1 g	1	30–60	261.5	38.6	300/20.7
SW-5822-220-SP(AQ)	300 g	300 mg–6.0 g	1	40–80	223.5	61.4	300/20.7
SW-5822-330-SP(AQ)	420 g	420 mg–8.4 g	1	40–80	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.

## NEW! High-efficiency spherical Phenyl, 20-45 $\mu\text{m}$ , 100 Å

(carbon content 10%, end-capping, surface area 320 m<sup>2</sup>/g, loading capacity 0.1–2%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-5B22-004-SP	5.4 g	5.4 mg–108 mg	2	5–15	113.8	12.4	400/27.5
SW-5B22-012-SP	20 g	20 mg–0.40 g	1	10–25	134.8	21.4	400/27.5
SW-5B22-025-SP	33 g	33 mg–0.66 g	1	10–25	184.0	21.4	400/27.5
SW-5B22-040-SP	48 g	48 mg–0.96 g	1	15–30	184.4	26.7	400/27.5
SW-5B22-080-SP	105 g	105 mg–2.1 g	1	20–50	257.4	31.2	350/24.0
SW-5B22-120-SP	155 g	155 mg–3.1 g	1	30–60	261.5	38.6	300/20.7
SW-5B22-220-SP	300 g	300 mg–6.0 g	1	40–80	223.5	61.4	300/20.7
SW-5B22-330-SP	420 g	420 mg–8.4 g	1	40–80	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.



## **NEW!** High-efficiency spherical Phenyl-Hexyl, 20-45 $\mu\text{m}$ , 100 $\text{\AA}$

(carbon content 10%, end-capping, surface area 320  $\text{m}^2/\text{g}$ , loading capacity 0.1–2%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SW-5C22-004-SP	5.4 g	5.4 mg–108 mg	2	5–15	113.8	12.4	400/27.5
SW-5C22-012-SP	20 g	20 mg–0.40 g	1	10–25	134.8	21.4	400/27.5
SW-5C22-025-SP	33 g	33 mg–0.66 g	1	10–25	184.0	21.4	400/27.5
SW-5C22-040-SP	48 g	48 mg–0.96 g	1	15–30	184.4	26.7	400/27.5
SW-5C22-080-SP	105 g	105 mg–2.1 g	1	20–50	257.4	31.2	350/24.0
SW-5C22-120-SP	155 g	155 mg–3.1 g	1	30–60	261.5	38.6	300/20.7
SW-5C22-220-SP	300 g	300 mg–6.0 g	1	40–80	223.5	61.4	300/20.7
SW-5C22-330-SP	420 g	420 mg–8.4 g	1	40–80	280.2	61.4	250/17.2

- Compatible with all flash chromatography systems.

# SepaFlash<sup>®</sup> Bio Cartridges

A fast, highly efficient and low cost technique for purification of peptides

## Flexibility and Performance

SepaFlash<sup>®</sup> Bio Cartridges offer users flexible sample loading options: direct liquid injection or solid loading when hyphenated with empty iLOK cartridges. Santai has optimized essential physical properties for a number of silicas such as porosity, surface area, loading capacities, and distribution of surface groups, resulting in improved separating efficiency.

## Versatile and Safe

SepaFlash HP Bio Cartridges are available in wide range of cartridge sizes for any situation (5.4 g, 20 g, 33 g, 48 g, 105 g, 155 g, 290 g and 410 g), allowing purification from milligrams to dozens of grams. These cartridges are pre-packed with UltraPure spherical C18, C8 or C4 bonded silica gel to meet the demands of biomolecule purification. Reinforced cartridge body allows for higher pressure rated up to 400 psi, fully compatible with any flash system on the market.

## Advantages

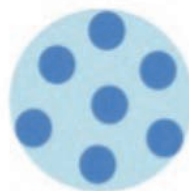
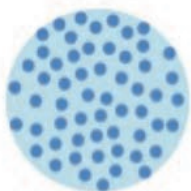
- Flexible sample loading options
- Improved pressure rated up to 400 psi
- High sample loading capacity as well as high peak resolution
- Fast and cost-saving method for raw biomolecule purification



# User Guide to Choose Proper Media for Biomolecule Flash Purification

## Pore Size-Effect on Chromatography

Larger pores allow larger solute molecules to be retained longer through maximum exposure to the surface area of the particles. Choose a pore size of 150Å or less for sample MW ≤ 2000. Choose a pore size of 300Å or greater for sample MW > 2000.



## High-efficiency spherical C18, 20-45 µm, 300 Å

(carbon content 6%, end-capped, surface area 100 m<sup>2</sup>/g, loading capacity 0.1-2%)

Item Number	Description
SW-5272-004-SP	4.5 g, High-efficiency spherical C18,20-45 µm, 300Å, carbon content 6%,end-capped,100m <sup>2</sup> /g
SW-5272-012-SP	16 g, High-efficiency spherical C18,20-45 µm, 300Å, carbon content 6%,end-capped,100m <sup>2</sup> /g
SW-5272-025-SP	26 g, High-efficiency spherical C18,20-45 µm, 300Å, carbon content 6%,end-capped,100m <sup>2</sup> /g
SW-5272-040-SP	38 g, High-efficiency spherical C18,20-45 µm, 300Å, carbon content 6%,end-capped,100m <sup>2</sup> /g
SW-5272-080-SP	82 g, High-efficiency spherical C18,20-45 µm, 300Å, carbon content 6%,end-capped,100m <sup>2</sup> /g
SW-5272-120-SP	120 g, High-efficiency spherical C18,20-45 µm, 300Å, carbon content 6%,end-capped,100m <sup>2</sup> /g
SW-5272-220-SP	225 g, High-efficiency spherical C18,20-45 µm, 300Å, carbon content 6%,end-capped,100m <sup>2</sup> /g
SW-5272-330-SP	320 g, High-efficiency spherical C18,20-45 µm, 300Å, carbon content 6%,end-capped,100m <sup>2</sup> /g

## High-efficiency spherical C8, 20-45 µm, 300 Å

(carbon content 4%, end-capped, surface area 100 m<sup>2</sup>/g, loading capacity 0.1-2%)

Item Number	Description
SW-5872-004-SP	4.5 g, High-efficiency spherical C8,20-45 µm, 300Å, carbon content 2%,end-capped,100m <sup>2</sup> /g
SW-5872-012-SP	16 g, High-efficiency spherical C8,20-45 µm, 300Å, carbon content 2%,end-capped,100m <sup>2</sup> /g
SW-5872-025-SP	26 g, High-efficiency spherical C8,20-45 µm, 300Å, carbon content 2%,end-capped,100m <sup>2</sup> /g
SW-5872-040-SP	38 g, High-efficiency spherical C8,20-45 µm, 300Å, carbon content 2%,end-capped,100m <sup>2</sup> /g
SW-5872-080-SP	82 g, High-efficiency spherical C8,20-45 µm, 300Å, carbon content 2%,end-capped,100m <sup>2</sup> /g
SW-5872-120-SP	120 g, High-efficiency spherical C8,20-45 µm, 300Å, carbon content 2%,end-capped,100m <sup>2</sup> /g
SW-5872-220-SP	225 g, High-efficiency spherical C8,20-45 µm, 300Å, carbon content 2%,end-capped,100m <sup>2</sup> /g
SW-5872-330-SP	320 g, High-efficiency spherical C8,20-45 µm, 300Å, carbon content 2%,end-capped,100m <sup>2</sup> /g

## High-efficiency spherical C4, 20-45 µm, 300 Å

(carbon content 2%, end-capped, surface area 100 m<sup>2</sup>/g, loading capacity 0.1-2%)

Item Number	Description
SW-5472-004-SP	4.5 g, High-efficiency spherical C4,20-45 µm, 300Å, carbon content 2%,end-capped,100m <sup>2</sup> /g
SW-5472-012-SP	16 g, High-efficiency spherical C4,20-45 µm, 300Å, carbon content 2%,end-capped,100m <sup>2</sup> /g
SW-5472-025-SP	26 g, High-efficiency spherical C4,20-45 µm, 300Å, carbon content 2%,end-capped,100m <sup>2</sup> /g
SW-5472-040-SP	38 g, High-efficiency spherical C4,20-45 µm, 300Å, carbon content 2%,end-capped,100m <sup>2</sup> /g
SW-5472-080-SP	82 g, High-efficiency spherical C4,20-45 µm, 300Å, carbon content 2%,end-capped,100m <sup>2</sup> /g
SW-5472-120-SP	120 g, High-efficiency spherical C4,20-45 µm, 300Å, carbon content 2%,end-capped,100m <sup>2</sup> /g
SW-5472-220-SP	225 g, High-efficiency spherical C4,20-45 µm, 300Å, carbon content 2%,end-capped,100m <sup>2</sup> /g
SW-5472-330-SP	320 g, High-efficiency spherical C4 ,20-45 µm, 300Å, carbon content 2%,end-capped,100m <sup>2</sup> /g

# iLOK® Series

SepaFlash® iLOK® flash cartridges offer users convenience for manual assembly, allowing for a flexible sample loading method: solid load and direct liquid injection. The series is offered in three formats: iLOK® flash cartridge pre-packed with UltraPure silica gel, iLOK®- SL cartridge which is pre-packed with 85% column volume of silica gel and iLOK® empty solid load cartridge comes with screw cap, frits, disbursing unit, O-ring and end tips.



- Innovative column design enables the user with convenient manual assembly and column stacking
- Available in a wide range of cartridge sizes for different sample loading requirements
- Reinforced cartridge body with maximum operating pressure up to 200 psi

## iLOK® Flash Cartridges (pre-packed, UltraPure irregular silica, 40–63 µm, 60 Å)

(surface area 500 m<sup>2</sup>/g, pH 6.5–7.5, loading capacity 0.1–10%)

Item Number	Column Size	Sample Size	Units/Box	Flow Rate (mL/min)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SD-5101-004	4 g	4 mg–0.4 g	20	15–40	115.1	12.8	200/13.8
SD-5101-012	12 g	12 mg–1.2 g	18	30–60	137.8	21.4	200/13.8
SD-5101-025	25 g	25 mg–2.5 g	12	30–60	188.2	21.6	200/13.8
SD-5101-040	40 g	40 mg–4.0 g	12	40–70	188.7	26.8	200/13.8
SD-5101-060	60 g	60 mg–6.0 g	12	60–150	173.3	36.6	200/13.8
SD-5101-080	80 g	80 mg–8.0 g	10	50–100	263.5	31.2	200/13.8
SD-5101-100	100 g	100 mg–10 g	6	80–220	146.6	60.4	150/10.3
SD-5101-120	120 g	120 mg–12 g	10	60–150	277.7	36.6	200/13.8
SD-5101-220	220 g	220 mg–22 g	6	80–220	218.5	60.6	150/10.3
SD-5101-330	330 g	330 mg–33 g	5	80–220	271.6	60.6	150/10.3

- Compatible with all flash chromatography systems.

## iLOK<sup>®</sup> Empty Solid Load Cartridges

(iLOK<sup>®</sup> empty solid load cartridge with screw cap, frits, disbursing unit, O-ring and end tips.)

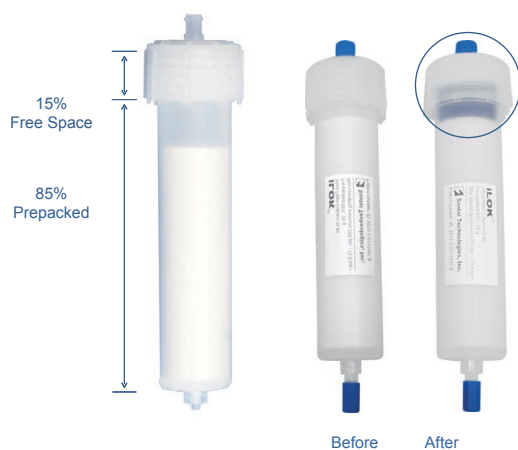
Item Number	Description	Units/Box	Volume (mL)	Cartridge Length (mm)	Cartridge ID (mm)	Max. Pressure (psi/bar)
SD-0000-004	Empty solid load cartridge, 4 g	optional	8	115.1	12.8	200/13.8
SD-0000-012	Empty solid load cartridge, 12 g	optional	27	137.8	21.4	200/13.8
SD-0000-025	Empty solid load cartridge, 25 g	optional	46	188.2	21.6	200/13.8
SD-0000-040	Empty solid load cartridge, 40 g	optional	70	188.7	26.8	200/13.8
SD-0000-060	Empty solid load cartridge, 60 g	optional	104	173.3	36.6	200/13.8
SD-0000-080	Empty solid load cartridge, 80 g	optional	147	263.5	31.2	200/13.8
SD-0000-100	Empty solid load cartridge, 100 g	optional	176	146.6	60.4	150/10.3
SD-0000-120	Empty solid load cartridge, 120 g	optional	215	277.7	36.6	200/13.8
SD-0000-220	Empty solid load cartridge, 220 g	optional	376	218.5	60.6	150/10.3
SD-0000-330	Empty solid load cartridge, 330 g	optional	539	271.6	60.6	150/10.3

- Compatible with all flash chromatography systems.

### Configurations for solid loading

Solid sample loading is a useful technique to load sample to be purified onto a column, particularly in the case of low-solubility samples. On this occasion, iLOK<sup>®</sup> flash cartridge is a very suitable choice.

The sample is dissolved in a suitable solvent and absorbed onto diatomaceous earth. After removal of the residual solvent, the adsorbent is put on top of partly filled cartridge or into an empty cartridge.



Configurations 1: iLOK<sup>®</sup>-SL Cartridges

85% pre-packed with silica gel  
15% free space for solid loading



Configurations 2: Empty iLOK<sup>®</sup> Cartridge

100% pre-packed with silica gel. Put the pre-adsorbed sample media into an empty cartridge

### Optional accessories and bulk silica gel

iLOK<sup>®</sup> empty solid load cartridge with screw cap, frits, disbursing unit, O-ring and end tips with optional bulk silica gel.

# NEW! iLOK<sup>®</sup>-SL Cartridges

*NEW iLOK<sup>®</sup>-SL (Solid-Load) Openable Columns (Twist-Cap) for Solid Loading with 15% Free Space on the Top!*

## Flexibility and Performance

iLOK<sup>®</sup>-SL Cartridges offer users convenience for manual assembly, allowing for flexible sample loading methods: solid loading and direct liquid injection. The unique, proprietary dry packing technique guarantees high resolution and reproducibility for everyday purifications.



15% Free Space for Solid Loading

## Versatile and Safe

iLOK<sup>®</sup>-SL Cartridges are available in a wide range of cartridge sizes for different sample loading requirements (3.5 g, 10 g, 20 g, 35 g, 70 g, 100 g, 185 g, 280 g), allowing purification from milligram to dozens of grams. They are packed with UltraPure silica (irregular silica or spherical), alumina, C18, C8, C4, DIOL, CN, NH<sub>2</sub>, SAX, SCX or ARG, to meet the specific requirements for a variety of sample purifications. Reinforced cartridge body allows for higher pressure up to 200 psi, meanwhile fully compatible with any flash system on the market.

## Advantages

- Higher peak resolution than competing products
- Flexible sample loading options
- Innovative design enables the user with convenient manual assembly
- Universal fittings provides fully compatibilities with any flash system on the market
- Improved pressure rated up to 200 psi

## SepaFlash® TLC Plates

SepaFlash® TLC plates are made of high-quality media, which exactly matches the packing material used in SepaFlash® flash columns. This combination provides the user with confidence and increased reproducibility in method development. The plates are coated by advanced instruments, offering highly increased sensitivity and faster analysis.



Silica Particle Size	6-10 µm
Layer Thickness	200 µm
pH Value	6.2-6.8
Adhesion Strength	Can mark with pencil and cut with glass cutter.
Anti-interference Ability	Resistance to concentrated sulfuric acid or potassium permanganate.
Separation Effects	Effective separation of standard three dye mixture.

Notes: Storage of TLC plates must keep away from moisture and pollutants. As preferred, use TLC plates after activation.

Item Number	Description	Units/Box
TL-8103-2101	High performance silica TLC plate, glass backed, F254, 25*80 mm	320
TL-8103-2106	High performance silica TLC plate, glass backed, F254, 200*200 mm	20
TL-8103-2116	High performance silica TLC plate, aluminum sheet, F254, 200*200 mm	20
TL-8601-2101-N	Neutral alumina TLC plate, glass backed, F254, 25*80 mm	320
TL-8601-2106-N	Neutral alumina TLC plate, glass backed, F254, 200*200 mm	20
TL-8601-2101-B	Basic alumina TLC plate, glass backed, F254, 25*80 mm	320
TL-8601-2106-B	Basic alumina TLC plate, glass backed, F254, 200*200 mm	20

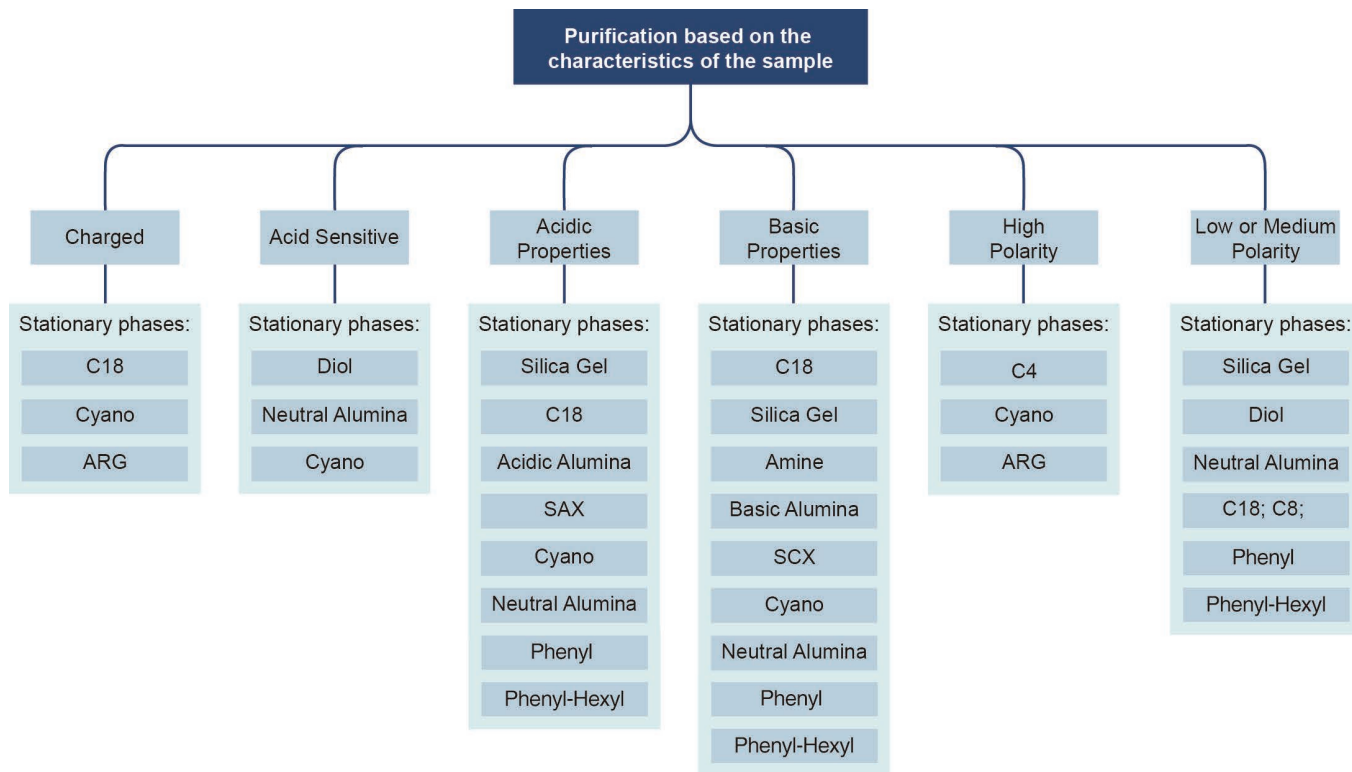
# SepaFlash® Flash Columns Product List

	Products Characteristics	Standard Series (Max. Pressure 300 psi)	iLOK™ Series (pre-packed) (Max. Pressure 200 psi)	E Series (Max. Pressure 300 psi)	HP Series (Max. Pressure 400 psi)	Bonded Series (Max. Pressure 400 psi)
Media packed	Irregular silica (40-63 µm, 60Å)	4 g-3000 g	4 g-330 g	4 g-3000 g	4 g-330 g	/
	Irregular silica (25-40 µm, 60Å)	4 g-330 g	/	/	4 g-330 g	/
	Spherical silica (40-75 µm, 70Å)	/	/	/	4 g-330 g	/
	Spherical silica (20-45 µm, 70Å)	/	/	/	4 g-330 g	/
	Alumina (50-75 µm, 55Å)	/	/	8 g-6000 g	/	/
C18 bonded phase packed	Irregular C18, 40-63 µm, 60Å	/	/	/	/	5.9 g-475 g
	Irregular C18, 40-63 µm, 90Å	/	/	/	/	5.2 g-420 g
	Hemispherical C18, 50 µm, 90Å	/	/	/	/	5.0 g-395 g
	Spherical C18, 40-60 µm, 120Å	/	/	/	/	4.5 g-350 g
	Spherical C18, 30-50 µm, 120Å	/	/	/	/	4.3 g-335 g
	Spherical C18, 40-75 µm, 100Å	/	/	/	/	4.6 g-385 g
	Spherical C18, 20-45 µm, 100Å	/	/	/	/	5.4 g-420 g
	Spherical C18(AQ), 20-45 µm, 100Å	/	/	/	/	5.4 g-420 g
	Spherical C18, 15 µm, 100Å	/	/	/	/	5.4 g-410 g
	Spherical C8, 20-45 µm, 100Å	/	/	/	/	5.4 g-420 g
Other bonded phase packed	Spherical C8(AQ), 20-45 µm, 100Å	/	/	/	/	5.4 g-420 g
	Spherical C4, 20-45 µm, 100Å	/	/	/	/	5.4 g-420 g
	Spherical CN, 20-45 µm, 100Å	/	/	/	/	5.4 g-420 g
	Spherical Diol, 20-45 µm, 100Å	/	/	/	/	5.4 g-420 g
	Irregular NH <sub>2</sub> , 40-63 µm, 60Å	/	/	/	/	5.9 g-475 g
	Irregular SAX, 40-63 µm, 60Å	/	/	/	/	5.9 g-475 g
	Irregular SCX, 40-63 µm, 60Å	/	/	/	/	5.9 g-475 g
	Spherical ARG, 20-45 µm, 100Å	/	/	/	/	5.4 g-420 g
	Spherical Phenyl, 20-45 µm, 100Å	/	/	/	/	5.4 g-420 g
	Spherical Phenyl-Hexyl, 20-45 µm, 100Å	/	/	/	/	5.4 g-420 g
Open top (solid load)		No	Yes	No	No	No

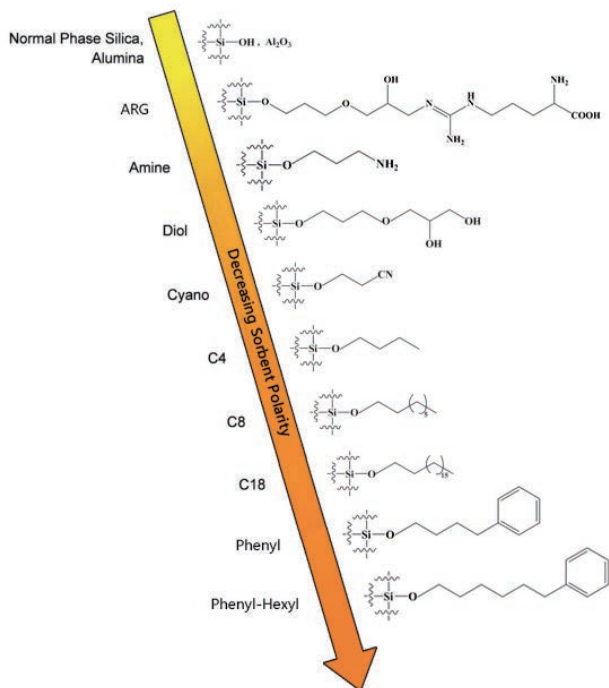


# Flash Column Sorbent Selection Guide

The following chart is designed to serve as a guide for the selection of the appropriate sorbent based on the characteristics of the sample to be purified.



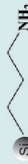
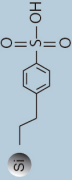
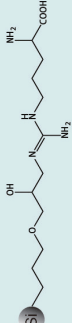


## Stationary Phase Polarity



Compatible with all Flash Chromatography Systems

**SEPAFLASH**®

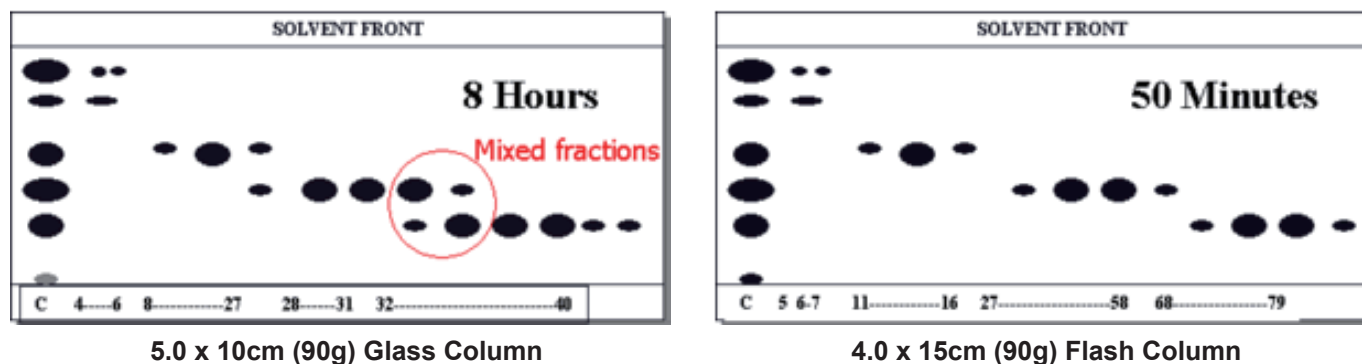
# Silica-based Stationary Phase Information Table

Sorbent	Structure	Characteristics	Typical Applications	Storage Conditions
Silica		Irregular, 40-63 µm	Most popular sorbent for day-to-day use for the purification of non-ionic polar organic compounds.	Single use recommended.
		Spherical, 40-75 µm		
Amine		Irregular, 40-63 µm	High performance sorbent for difficult separations (isomers); Higher loading capacity.	Single use recommended.
		Endcapping: Yes Amino content: 1.3 mmol/g		
Diol		Irregular, 20-45 µm	Good alternative for normal phase purification of compounds with basic properties, which would normally have to be purified by reversed phase.	Flush the cartridge with 3 column volumes of 80% acetonitrile in water or 100% isopropanol. Store in flush solvent with tips.
		Spherical, 20-45 µm Endcapping: Yes Carbon content: 5.0%		
Cyano		Spherical, 20-45 µm	Versatile sorbent that can be used either as normal or reversed phase. Indicated for products with intermediate to extreme polarity. The slightly hydrophobic nature of cyano group offers alternative selectivities.	Flush the cartridge with 3 column volumes of 80% acetonitrile in water or 80% methanol in water. Store in flush solvent with tips.
		Endcapping: Yes Carbon content: 5.5%		
C4		Spherical, 20-45 µm	Reversed-phase matrix can provide less retention of non-polar compounds than C18 and C8 and is useful in ion-pairing chromatography. Used to separate large biomolecules.	Flush the cartridge with 3 column volumes of 80% acetonitrile in water or 80% methanol in water. Store in flush solvent with tips.
		Endcapping: Yes Carbon content: 5.8%		
C8		Spherical, 20-45 µm	Reversed-phase matrix with a moderate degree of hydrophobicity that works well for separating a wide range of compounds. May be used as replacement of C18 when shorter retention times are desired or required.	Flush the cartridge with 3 column volumes of 80% acetonitrile in water or 80% methanol in water. Store in flush solvent with tips.
		Endcapping: Yes Carbon content: 7.0%		
C18		Spherical, or Irregular	Indicated for the purification of medium to high polarity compounds, they provide reproducible purification without the complexity and cost of preparative HPLC.	Flush the cartridge with 3 column volumes of 80% acetonitrile in water or 80% methanol in water. Store in flush solvent with tips.
		Endcapping: Yes Carbon content: 17%		
SAX		Irregular, 40-63 µm	It is mainly used as a strong anion exchanger in ion chromatography and ion exchange SPE. It is especially used for the "Catch and Release" purification of weak acids.	Flush the cartridge with 10 column volumes of 80% methanol in water or 100% isopropanol. Store in flush solvent with tips.
		Endcapping: No Carbon content: 8.0%		
SCX		Irregular, 40-63 µm	It is widely used for the scavenging of amines and other basic functionalities, including weakly basic anilines, borohydrides, and metals such as Ni and Ag.	Flush the cartridge with 10 column volumes of 80% methanol in water or 100% isopropanol. Store in flush solvent with tips.
		Endcapping: No Carbon content: 10%		
ARG		Spherical, 20-45 µm	ARG silica can separate hydrophilic compounds such as amino acid, peptide, vitamin and nucleic acid. ARG silica is dedicated to the separation of various hydrophilic compounds.	Flush the cartridge with 3 column volumes of 80% acetonitrile in water or 80% methanol in water. Store in flush solvent with tips.
		Endcapping: Yes Carbon content: 8.0%		
Phenyl		Spherical, 20-45 µm	Phenyl silica has unique retention for aromatic compounds. Therefore Phenyl silica is dedicated to the separation of the compounds with aromatic rings, including peptides and proteins.	Flush the cartridge with 3 column volumes of 80% acetonitrile in water or 80% methanol in water. Store in flush solvent with tips.
		Endcapping: Yes Carbon content: 10%		
Phenyl-Hexyl		Spherical, 20-45 µm	Compared with Phenyl silica, Phenyl-Hexyl silica is more hydrophobic. Phenyl-Hexyl silica could be used for the separation of aromatic compounds while C4 or C18 silica shows poor resolution.	Flush the cartridge with 3 column volumes of 80% acetonitrile in water or 80% methanol in water. Store in flush solvent with tips.
		Endcapping: Yes Carbon content: 10%		

# Advantages of Using SepaFlash® Flash Columns

Compared with traditional separation methods, SepaFlash® flash columns have the following advantages:

- Using SepaFlash® flash columns significantly reduces the separation and purification times when compared to traditional glass columns – see example:



- The separation and purification costs in time, apparatus and materials will be significantly reduced when compared with traditional flash chromatography.
- Pre-packed SepaFlash® flash columns greatly reduce the risks to human health and environment.

## Tips for Using SepaFlash® Chromatography Products

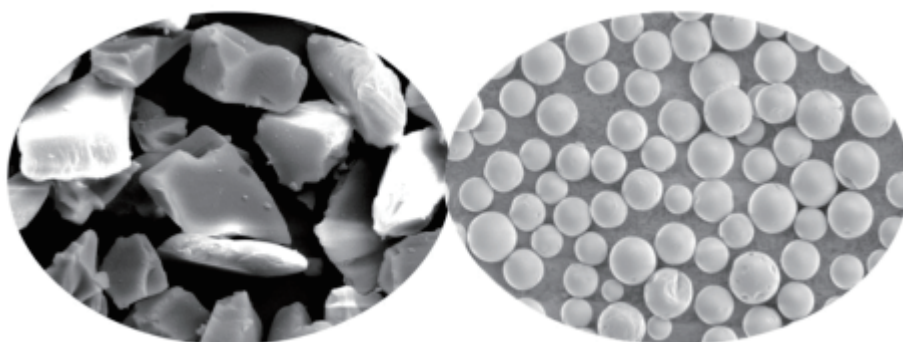
- SepaFlash® silica flash columns are disposable and for single use, but with proper handling, SepaFlash® silica cartridges can be reused without sacrificing performance. For multiple usages, simply air dry the flash column using compressed air and store the column in a sealed bag.
- SepaFlash® alumina flash columns are useful when the samples are sensitive and prone to degradation on silica gel.
- SepaFlash® bonded silica flash columns offer a wide variety of sorbents to better satisfy the requirements for different users, and this series can be used multiple times under the correct preservation conditions.
- Solid sample loading is a useful technique to load sample to be purified onto a column, particularly in the case of low-solubility samples. On this occasion, iLOK® flash cartridge is a very suitable choice.
- For safety reasons, do not operate the flash column above the maximum pressure printed on the column body.
- For optimum use of the flash column, please use the eluents which have been filtered through a 0.45 µm filter membrane to remove any impurities.
- Storage of TLC plates must keep away from moisture and pollutants. As preferred, use TLC plates after activation.

# SepaFlash® UltraPure Media Chart

Irregular

Spherical

Bonded Phases



## UltraPure Silica

Media	Particle	Container Size	Item Number
Silica	40–63 µm, 60 Å Irregular	500 g	ST5101-IR-500g
		1 kg	ST5101-IR-1kg
		25 kg	ST5101-IR-25kg
Silica	25–40 µm, 60 Å Irregular	500 g	ST5102-IR-500g
		1 kg	ST5102-IR-1kg
		25 kg	ST5102-IR-25kg
Silica	40–75 µm, 70 Å Spherical	500 g	ST2101-SP-500g
		1 kg	ST2101-SP-1kg
		20 kg	ST2101-SP-20kg

Media	Particle	Container Size	Item Number
Silica	40–75 µm, 100 Å Spherical	500 g	ST2121-SP-500g
		1 kg	ST2121-SP-1kg
		20 kg	ST2121-SP-20kg
Silica	20–45 µm, 70 Å Spherical	500 g	ST2102-SP-500g
		1 kg	ST2102-SP-1kg
		20 kg	ST2102-SP-20kg
Silica	20–45 µm, 100 Å Spherical	500 g	ST2122-SP-500g
		1 kg	ST2122-SP-1kg
		20 kg	ST2122-SP-20kg

## UltraPure Bonded Phases

Media	Particle	Container Size	Item Number
C18	40–63 µm, 60 Å Irregular	500 g	ST5201-IR-500g
		1 kg	ST5201-IR-1kg
		25 kg	ST5201-IR-25kg
C18	40–63 µm, 90 Å Irregular	500 g	ST5211-IR-500g
		1 kg	ST5211-IR-1kg
		25 kg	ST5211-IR-25kg
C18	50 µm, 90 Å Hemispherical	500 g	ST5211-SS-500g
		1 kg	ST5211-SS-1kg
		25 kg	ST5211-SS-25kg
C18	30–50 µm, 120 Å Spherical	500 g	ST5232-SP-500g
		1 kg	ST5232-SP-1kg
		25 kg	ST5232-SP-25kg

Media	Particle	Container Size	Item Number
C18	40–75 µm, 100 Å Spherical	500 g	ST5221-SP-500g
		1 kg	ST5221-SP-1kg
		25 kg	ST5221-SP-25kg
C18	20–45 µm, 100 Å Spherical	500 g	ST5222-SP-500g
		1 kg	ST5222-SP-1kg
		25 kg	ST5222-SP-25kg
C18(AQ)	20–45 µm, 100 Å Spherical	500 g	ST5222-SP(AQ)-500g
		1 kg	ST5222-SP(AQ)-1kg
		25 kg	ST5222-SP(AQ)-25kg
Cyano	20–45 µm, 100 Å Spherical	500 g	ST5322-SP-500g
		1 kg	ST5322-SP-1kg
		25 kg	ST5322-SP-25kg

Media	Particle	Container Size	Item Number
C18	40–60 µm, 120 Å Spherical	500 g	ST5231-SP-500g
		1 kg	ST5231-SP-1kg
		25 kg	ST5231-SP-25kg
C8	20–45 µm, 100 Å Spherical	500 g	ST5822-SP-500g
		1 kg	ST5822-SP-1kg
		25 kg	ST5822-SP-25kg
C8 (AQ)	20–45 µm, 100 Å Spherical	500 g	ST5822-SP(AQ)-500g
		1 kg	ST5822-SP(AQ)-1kg
		25 kg	ST5822-SP(AQ)-25kg
Diol	20–45 µm, 100 Å Spherical	500 g	ST5922-SP-500g
		1 kg	ST5922-SP-1kg
		25 kg	ST5922-SP-25kg
ARG	20–45 µm, 100 Å Spherical	500 g	ST5622-SP-500g
		1 kg	ST5622-SP-1kg
		25 kg	ST5622-SP-25kg
Phenyl	20–45 µm, 100 Å Spherical	500 g	ST5B22-SP-500g
		1 kg	ST5B22-SP-1kg
		25 kg	ST5B22-SP-25kg

Media	Particle	Container Size	Item Number
C4	20–45 µm, 100 Å Spherica	500 g	ST5422-SP-500g
		1 kg	ST5422-SP-1kg
		25 kg	ST5422-SP-25kg
Phenyl-Hexyl	20–45 µm, 100 Å Spherical	500 g	ST5C22-SP-500g
		1 kg	ST5C22-SP-1kg
		25 kg	ST5C22-SP-25kg
C18	15 µm, 100 Å Spherical	500 g	ST5223-SP-500g
		1 kg	ST5223-SP-1kg
		25 kg	ST5223-SP-25kg
Amine	40–63 µm, 60 Å Irregular	500 g	ST5501-IR-500g
		1 kg	ST5501-IR-1kg
		25 kg	ST5501-IR-25kg
SAX	40–63 µm, 60 Å Irregular	500 g	ST5001-IR-500g
		1 kg	ST5001-IR-1kg
		25 kg	ST5001-IR-25kg
SCX	40–63 µm, 60 Å Irregular	500 g	ST5701-IR-500g
		1 kg	ST5701-IR-1kg
		25 kg	ST5701-IR-25kg

Contact us for more Bonded Phase options.

## High-quality Media

Media	Particle	Container Size	Item Number
Silica	40–63 µm, 60 Å Irregular	500 g	ST8101-IR-500g
		1 kg	ST8101-IR-1kg
		25 kg	ST8101-IR-25kg
Neutral alumina	50–75 µm, 55 Å Irregular	500 g	ST8601-N-500g
		1 kg	ST8601-N-1kg
		25 kg	ST8601-N-25kg
Acidic alumina	50–75 µm, 55 Å Irregular	500 g	ST8601-A-500g
		1 kg	ST8601-A-1kg
		25 kg	ST8601-A-25kg
Basic alumina	50–75 µm, 55 Å Irregular	500 g	ST8601-B-500g
		1 kg	ST8601-B-1kg
		25 kg	ST8601-B-25kg
C18	40–63 µm, 60 Å Irregular	500 g	ST8201-IR-500g
		1 kg	ST8201-IR-1kg
		25 kg	ST8201-IR-25kg

Media	Particle	Container Size	Item Number
C18	20–45 µm, 100 Å Spherical	500 g	ST8222-SP-500g
		1 kg	ST8222-SP-1kg
		25 kg	ST8222-SP-25kg



# How to Order

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Orders can be placed by phone, fax, email, or mail.

## When placing your order please have the following information available

- (1) Your name.
- (2) Company name, billing, and shipping addresses.
- (3) Purchase order number or credit card information.
- (4) Item number and product description.
- (5) Size, quantity, and unit of measurement.

### By Phone

You can place an order with our Customer Service staff between 8:30 a.m. and 5:30 p.m.

**Phone: +44 (0) 1322 285850**

### By Fax

Orders can be faxed anytime to the following number:

**Fax: +44 (0) 1322 285851**

### By Email

Orders can be emailed to the following address:

**sales@uvison.com**

### By Mail

Orders can be mailed to our UK Distributor:



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