

SepaFlash® Column Overview for Standard Series

SepaFlash® columns are an excellent alternative to the other flash columns available on the market, and you will enjoy fast, easy purification and scale-up from milligram to hundreds of grams. SepaFlash® 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 definition, 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 ten years, to ensure that the chemists are able to complete the everyday purification with pleasure.

Versatile

SepaFlash® columns are available from 4 gram up to 1.6 kg column size allowing purification from 10 milligram up to 160 grams. The enhanced product offering with high-efficiency silica gel (irregular, 25-40 µm, 60 Å) provides an outstanding performance with lower use-cost.

Safe

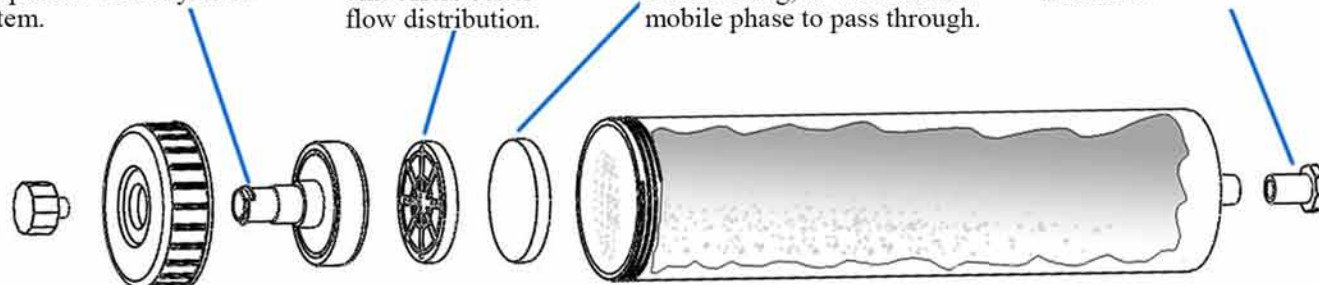
Innovative column design on SepaFlash® columns are pressure rated for safe operation. Machine assembling column heads ensure that the columns are able to withstand the pressure capability of modern flash systems and not leak valuable compound.

Luer-Lok end fittings are compatible with any flash system.

Patented disbursing unit offers better flow distribution.

Polyethylene frits prevent media from leaking, as well as allow mobile phase to pass through.

End fittings keep media from moisture.



Innovative columns design can stand pressure up to 300 psi, 100% guaranteed leak-free.

Innovative and semi-automated dry packing technology.

Several types of silica gel, alumina, etc. are available.

Over ten years of "lot-to-lot" better resolution and reproducibility.

Standard Series

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

- ※ Ultra-pure 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.



Ultra-pure irregular silica, 40–63 μm , 60 Å

(surface area 500 m²/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

- ※ Compatible with all flash chromatography systems, for example ISCO, Biotage, Yamazen, etc.

High-efficiency irregular silica, 25–40 μm , 60 Å

(surface area 500 m²/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	60–100	264.6	36.2	200/13.8
S-5102-0220	220 g	220 mg–33 g	6	80–160	203.7	60.1	150/10.3
S-5102-0330	330 g	330 mg–50 g	5	80–160	275.0	60.4	150/10.3

- ※ Compatible with all flash chromatography systems, for example ISCO, Biotage, Yamazen, etc.

Applications and results with SepaFlash® flash 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®

SepaFlash® Silica Flash Column 120 g

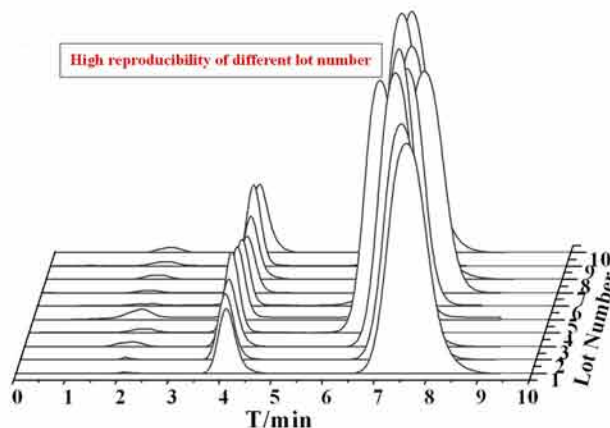
Sample: Acetophenone and P-Methoxyacetophenone

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®

Santai evaluated the performance of the SepaFlash® columns compared to two well-known brands. Results show SepaFlash® outperforms the competitions.

SepaFlash® 120 g Versus Brand A 120 g

Sample: Acetophenone and P-Methoxyacetophenone

Mobile Phase: 80% hexane and 20% ethyl acetate

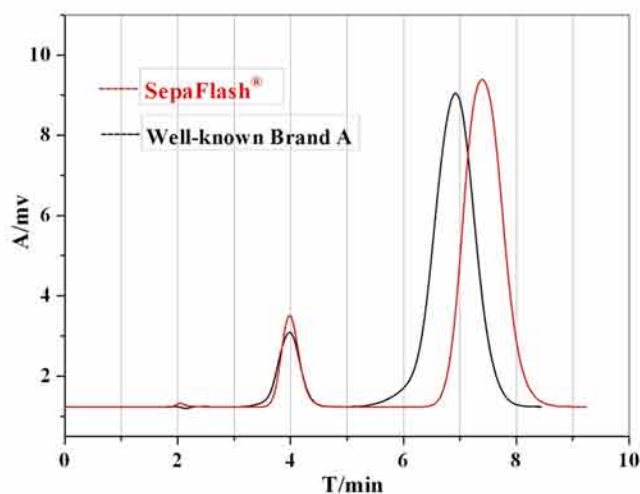
Flow Rate: 85 mL/min

Sample Size: 1.5 mL

Wave Length: 254 nm

Observed Chromatographic Parameters:

Column Size	t_R	N	R_s	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

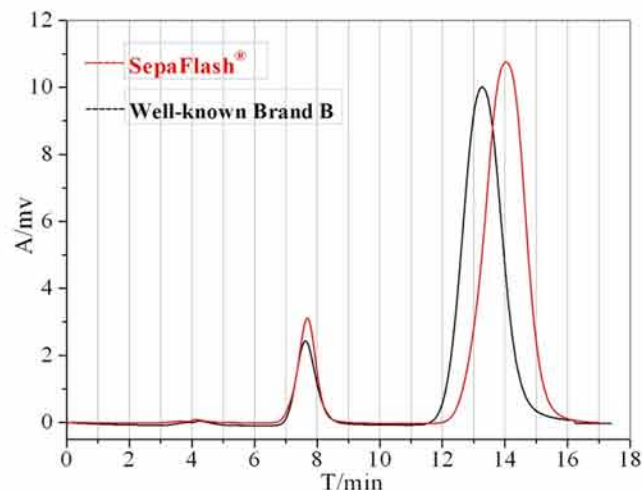
Flow Rate: 120 mL/min

Sample Size: 5 mL

Wave Length: 254 nm

Observed Chromatographic Parameters:

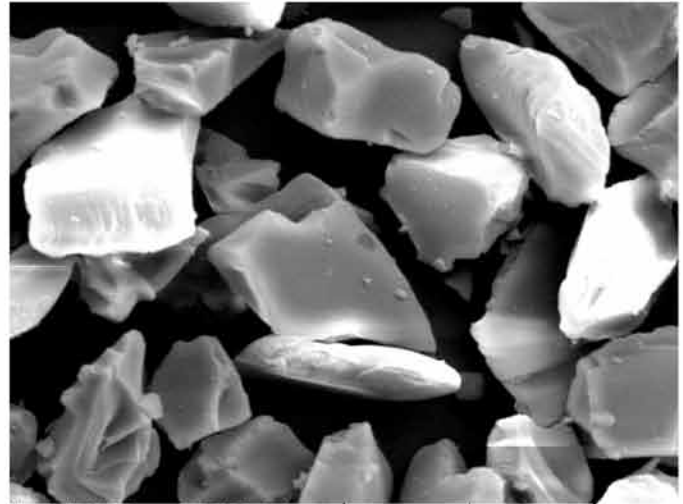
Column Size	t_R	N	R_s	T
SepaFlash® 330g	7.7 min	539	3.54	0.97
Brand B 340g	7.6 min	510	3.11	1.11



The characteristics for ultra-pure 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 you time and money. The irregular silica gel has two kinds of specifications, 40-63 μm and 25-40 μm .

Especially, Santai further develops the stable dry packing technique for irregular 25-40 μm silica, and the pre-packed 25-40 μm silica cartridges will show extraordinary separation ability.



SEM picture of 40-63 μm silica gel

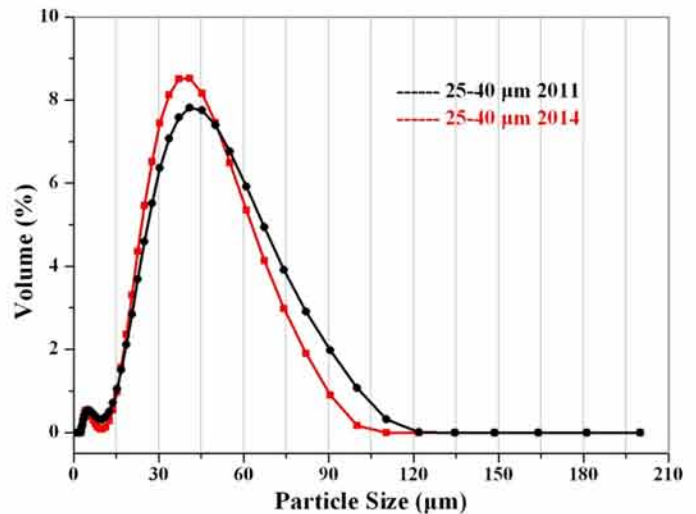
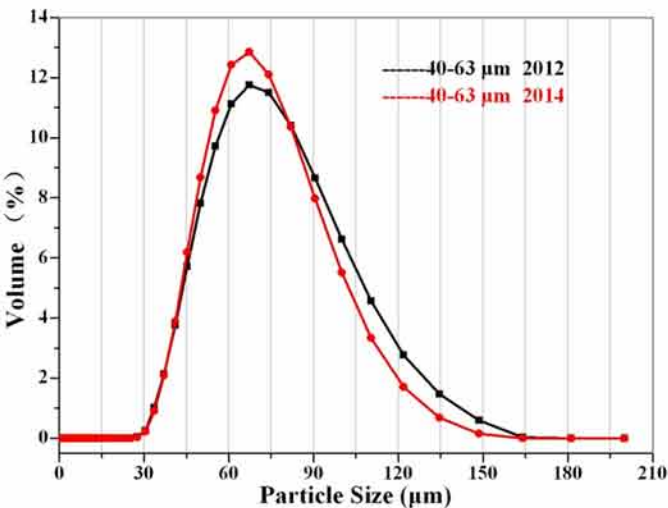
Santai's silica gel also offers these advantages over competitor's products:

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 level content: Water level of silica gel can affects the selectivity of the silica. Santai's irregular silica gel has a controlled water content of 4% to 6%.

High surface area: Higher surface area (500 m^2/g for 60 \AA pore size) provides greater separation power.

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 reducing solvent consumption, which will lead to cost savings. The high batch-to-batch reproducibility of particle size distribution fundamentally guarantees the excellent separation performance. The details please see the SEM picture and particle size distribution of two batches.



Particle size distribution of two batches for 40-63 μm and 25-40 μm silica gel

NEW COLUMN SIZE — 3 kg

SepaFlash® columns are now available in a 3 kg column size. Purify up to 300 grams in a single run with the same SepaFlash® 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.



Ordering Information:

Ultra-pure irregular silica, 40–63 μm , 60 \AA (NEW Product)

(surface area 500 m^2/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, for example ISCO, Biotage, Yamazen, etc.

Better Separations with SepaFlash®

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

Observed Chromatographic Parameters:

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

