



SepaFlash™ Columns Family

Enjoy precise separations; our versatile series, fully compatible with all flash chromatography instruments.



Simplify your purification, maximize your efficiency!

Santai Science Inc.

Introduction

Introduction

Welcome to “SepaFlash™ Columns Brochure”, your comprehensive guide to Santai Science’s advanced chromatography technologies. This brochure showcases our innovative flash chromatography columns designed to enhance purification efficiency and reliability.

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Explore the Santai Science Portfolio



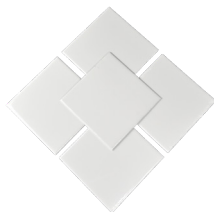
Explore the Santai Science Portfolio

At Santai Science, we take pride in offering a diverse portfolio of advanced separation and purification solutions tailored to meet the evolving needs of scientists and professionals worldwide. From innovative chromatography systems to high-performance consumables, our products are designed to deliver precision, efficiency, and reliability. Browse below to discover how our cutting-edge technologies can empower your research and applications.

SepaBean™ machines & SepaFlash™ Columns

Product Line	SepaBean™ machines	SepaFlash™ FP LT-ELSD	SepaFlash™ Columns
Picture			
Description	<p>SepaBean™ machines deliver efficient and user-friendly flash chromatography solutions for diverse applications.</p> <p>Available Models:</p> <ul style="list-style-type: none"> • SepaBean™ machine U • SepaBean™ machine T • SepaBean™ machine • SepaBean™ machine 2 • SepaBean™ machine L 	<p>The SepaFlash™ FP LT-ELSD is a low-temperature evaporative light scattering detector, ideal for non-chromophoric analytes like carbohydrates, lipids, and polymers. It ensures high sensitivity, low noise, and optimal detection of thermally unstable compounds, compatible with all SepaBean™ models.</p>	<p>SepaFlash™ columns deliver precise, durable, and efficient purification for diverse chromatography applications.</p> <p>Available Series:</p> <ul style="list-style-type: none"> • SepaFlash™ Standard • SepaFlash™ Large Size • SepaFlash™ HP, Bio & Bonded • SepaFlash™ iLOK™ & iLOK™-SL • SepaFlash™ iLOK™ Large-Size

Other SepaFlash™ Products

Product Line	SepaFlash™ Ultra-Pure Bare Silica Gels	SepaFlash™ Ultra-Pure Bonded Silica Gels	SepaFlash™ TLC Plates
Picture			
Description	<p>SepaFlash™ Ultra-Pure bare silica gels in bulk provide high-quality phases for chromatography, available in both irregular and spherical shapes.</p> <p>With particle sizes ranging from 10 µm to 200 µm and pore diameters from 50 Å to 300 Å, these silicas meet diverse application needs. They are offered in convenient 1 kg, and 25 kg containers.</p>	<p>SepaFlash™ Ultra-Pure bonded silica gels offer versatile chromatography solutions in irregular or spherical shapes, with particle sizes from 10 µm to 40 - 75 µm and pore diameters of 50 Å to 300 Å.</p> <p>Available in reversed phase, normal phase, ion-exchange, HILIC, and alumina phases.</p>	<p>SepaFlash™ TLC plates are manufactured with high-quality media to match the sorbents in SepaFlash™ flash columns. This alignment ensures greater reproducibility in method development.</p> <p>Available with aluminum and glass backings, these plates come in a wide range of sizes from 2.5 x 7.5 cm to 20 x 20 cm, supporting both analytical and preparative chromatography needs.</p>



About Santai

Discover Santai Technologies

Founded in 2004, Santai Technologies is a leading technology company dedicated to advancing separation and purification tools. With over 20 years of expertise, we have become a trusted partner for professionals and scientists across the pharmaceutical, biotechnology, fine chemicals, natural products, and petrochemical industries.

Santai is renowned worldwide for its outstanding flash chromatography instruments and consumables, setting new benchmarks for efficiency, precision, and reliability in the global market.



SANTAI

Santai: 20 Years of Innovation in Chromatography

For two decades, Santai has been a leader in chromatography innovation, providing for scientists worldwide. With our advanced SepaBean™ machines and SepaFlash™ innovation and quality, continually empowering researchers with more effective pur

Santai Technologies was founded to develop separation and chromatography solutions.



2004

2005

The SepaFlash™ HP Series has been launched, offering enhanced pressure resistance.



2009

2013

The SepaFlash™ and SepaFlash™ have been launched.



2015



The SepaFlash™ Standard Series was launched, leveraging proprietary packing technology for enhanced performance.



The SepaFlash™ iLOK™ has been launched, providing the convenience of manual assembly and flexible sample loading options.



Santai was recognized as "High-tech Enterprise".

The SepaBean™ was launched, providing advanced chromatography networking capabilities.



About Santai Science

Established in 2018 as a sister company of Santai Technologies, Santai Science is headquartered in Montreal, Canada. Its core mission centers on the commercialization of cutting-edge separation and purification tools, including product demonstrations and specialized services.

Santai Science also plays a vital role in providing customer training, delivering technical support, and managing order processing and shipment directly from its Montreal office.

Our Extensive Global Reach

Santai operates and maintains warehousing services across America, Asia, India, and Europe. This strategic global presence ensures that our products and services are readily accessible and efficiently delivered to clients around the world.

cutting-edge solutions that streamline purification processes
columns enhancing efficiency, we remain committed to
purification technologies.



Standard Size 3 kg
Bonded Series
hed.



Santai Science was founded in
Canada, alongside the
iLOK™-SL flash column with
15 % free space for solid loading.



The iLOK™ Large Size empty
columns (800 g to 7 kg)
were launched, together with new
product lines like bulk silica gels
and TLC plates.



2016

2018

2021

2022

2024-2025

ise”
an™ machine was
as a unique flash
aphy system with
ilities and built-in
intelligence.



The SepaBean™ machine L was
launched, featuring large 5 kg and
10 kg flash columns designed for
the pilot-scale market.



Generation



The 2nd generation SepaBean™
machine is launching, offering
enhanced performance.

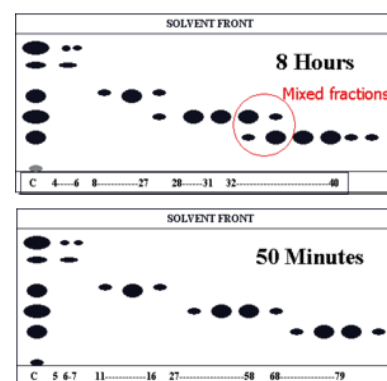


Why Choose SepaFlash™ Columns

Advantages of SepaFlash™ Columns

Compared to traditional manual glass column chromatography, automatic flash chromatography using SepaFlash™ column offers several key advantages such as:

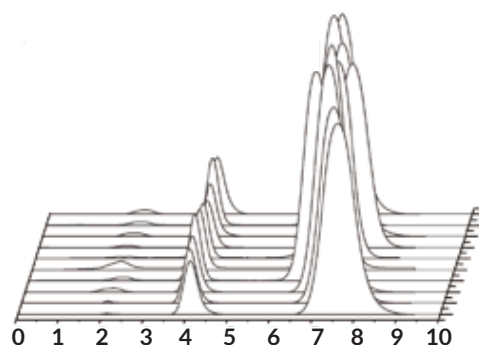
- It significantly reduces separation and purification times, as demonstrated in the following example on the right.
- Automatic flash chromatography saves time and reduces solvent consumption, making the process more efficient.
- Pre-packed SepaFlash™ flash columns minimize risks to human health and the environment, ensuring a safer and more sustainable workflow.



Key Features

■ Precision Packing and Reliable Reproducibility

Since 2004, SepaFlash™ columns have delivered consistent performance through advanced semi-automated packing technology, ensuring precision, efficiency, and robust lot-to-lot reproducibility. With low fines, these columns create a stable separation environment, minimizing contamination risks and maintaining reliability.



Experimental Conditions on SepaFlash™ Silica 120 g:
Sample: acetophenone & p-methoxyacetophenone (1.5 mL)
Mobile Phase: 80 % hexane and 20 % ethyl acetate
Flow Rate: 85 mL/min
Wavelength: 254 nm

■ Superior Quality Adsorbents

SepaFlash™ columns feature high-performance adsorbents, including silicas and aluminas, with custom packing options. Tight particle distribution prevents leaching, channeling, and tailing, while controlled water activity ensures reliability.

■ Innovative Design and Construction

These leak-free, pre-packed polypropylene cartridges ensure safety and reliability. With universal Luer-Lok® fittings, they offer seamless compatibility with various flash systems.

■ Product Versatility: a Range of Series for Every Needs

- **Standard Series:** ideal for general-purpose applications.
- **Large Size Series:** designed for high-capacity separations, meeting the needs of large-scale applications.
- **HP Series:** high-performance options for demanding separations.
- **Functionalized (Reversed Phase & Bonded) Series:** tailored for specific sorbent requirements and optimized for separating both non-polar and polar samples.
- **iLOK™ & iLOK™-SL Series:** advanced locking technology for enhanced ease of use.

By combining superior materials, innovative technology, and a diverse product range, SepaFlash™ columns deliver exceptional performance, reliability, and flexibility for a wide variety of chromatographic applications.

Tips for Using SepaFlash™ Columns

Introduction

To get the most out of your SepaFlash™ columns, it's important to follow best practices tailored to each column type and application. These tips will help ensure optimal performance, enhance column longevity, and maintain safety during use, whether working with silica, alumina, or bonded silica flash columns.

- **Silica flash columns:** while SepaFlash™ silica flash columns are designed for single use, they can be reused with proper handling without compromising performance. Ensure thorough cleaning and drying between uses to maintain efficiency.
- **Alumina flash columns:** these columns are ideal for samples that are sensitive or prone to degradation on silica gel, offering an alternative for challenging separations.
- **Bonded silica flash columns:** this series provides a wide range of sorbents to meet diverse user requirements. With correct storage and handling, these columns can be reused multiple times without performance loss.
- **Safety guidelines:** never exceed the maximum pressure indicated on the column to avoid damage or accidents.
- **Optimal eluent preparation:** to ensure the best performance, filter all eluents through a 0.45 µm filter membrane to remove impurities and prevent blockages.

By following these guidelines, you can maximize the efficiency, longevity, and safety of your SepaFlash™ columns while achieving consistent, high-quality results.

SepaFlash™ Columns Compatibility

SepaFlash™ Columns are engineered for universal compatibility with a broad range of flash chromatography systems available on the market. Equipped with Luer-Lok® end fittings, these columns guarantee a secure and leak-free connection, ensuring seamless integration regardless of the equipment brand or model.

This universal design makes SepaFlash™ columns an ideal choice for laboratories with diverse chromatography systems, eliminating the need for specialized adapters or additional fittings. Whether you are using:

- Santai Science® SepaBean™
- Biotage® Isolera® & Selekt®
- Teledyne Isco® CombiFlash®
- Advion-Interchim® puriFlash®
- Buchi® Pure®

SepaFlash™ columns deliver reliable performance without compromise.

Designed to meet the needs of modern laboratories, SepaFlash™ columns offer versatility, ease of use, and high-quality performance, as expected from Santai Science.

Note: depending on the equipment used, an adapter may be required to use the SepaFlash™ Large Size Series. Please refer to the application note for further details.



BLL-0304: Luer connector kit for large columns
(800 g, 1,600 g, 3 kg, and 5 kg)



BLL-NPT635-XXX: 10 kg cartridge adaptor
available for 1/2, 3/8, 3/16, and 1/8 inches



Comparison of SepaFlash™ Irregular Silica Columns vs Competition

SepaFlash™ columns deliver superior performance compared to competing products, attributed to their exceptional irregular silica gel (40 - 63 µm, 60 Å) quality and advanced packing technology. For a deeper understanding, examples showcasing their outstanding performance are presented below.

Better Resolution with SepaFlash™

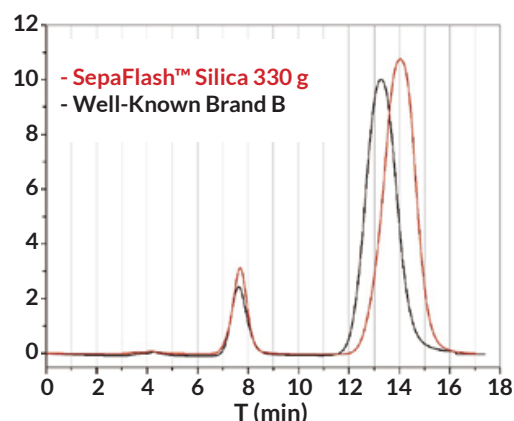
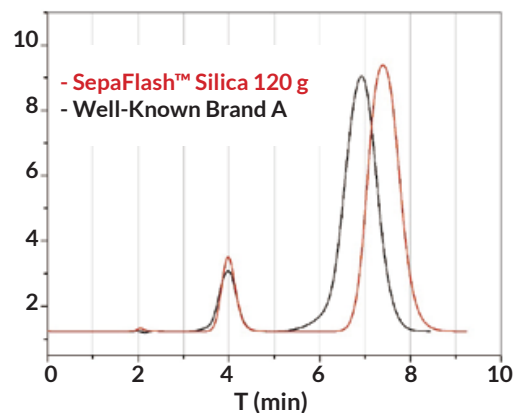
Santai conducted a performance evaluation of SepaFlash™ columns against well-known brands. The results demonstrated that SepaFlash™ columns consistently outperformed the competitors, offering superior peak-to-peak resolution.

Experimental Conditions

Experiment using SepaFlash™ Irregular Silica Columns	
Column Size	Experiment #1: 120 g Experiment #2: 330 g
Sample	Acetophenone & p-methoxyacetophenone
Mobile Phase	80 % hexane and 20 % ethyl acetate
Flow Rate	Experiment #1: 85 mL/min Experiment #2: 120 mL/min
Sample Size	Experiment #1: 1.5 mL Experiment #2: 5 mL
Wavelength	254 nm

Observed Chromatographic Parameters

Brand	t _R	N	Rs	T
Experiment #1				
SepaFlash™ 120 g	4 min	519	3.54	1.13
Brand A 120 g	4 min	408	2.73	0.92
Experiment #2				
SepaFlash™ 330 g	7.7 min	539	3.54	0.97
Brand B 340 g	7.6 min	510	3.11	1.11



Better Separation with SepaFlash™

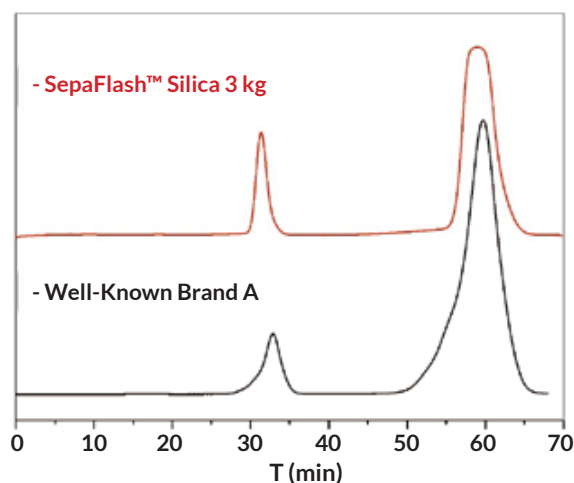
This experiment evaluates the separation performance of SepaFlash™ 3 kg columns versus a competitor's 3 kg column. The results demonstrate superior resolution and efficiency for SepaFlash™ under identical conditions.

Experimental Conditions

Experiment using SepaFlash™ Irregular Silica Columns	
Column Size	3 kg
Sample	Acetophenone & p-methoxyacetophenone
Mobile Phase	80 % hexane and 20 % ethyl acetate
Flow Rate	250 mL/min
Sample Size	40 mL
Wavelength	254 nm

Observed Chromatographic Parameters

Brand	t _R	N	Rs	T
SepaFlash™ 3 kg	31 min	890	5.13	1.20
Brand A 3 kg	33 min	743	4.00	0.80



Maximize Efficiency & Savings with SepaFlash™ Spherical Silica Columns

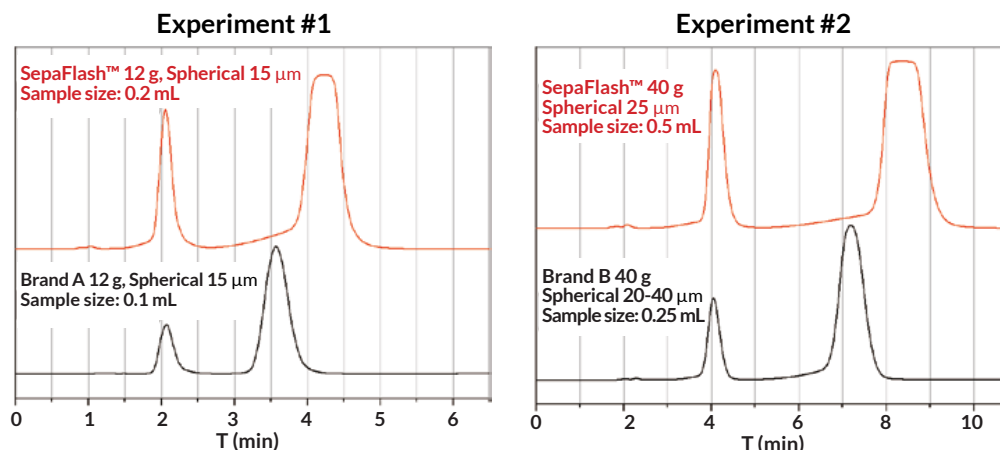
SepaFlash™ Spherical Silica Columns offer high loading capacity, allowing you to purify larger sample amounts in a single run. This efficiency translates to lower reagent costs, reduced solvent consumption, and minimized column usage, ultimately making your chromatography process more cost-effective and environmentally friendly. Experience superior performance and streamlined workflows with SepaFlash™.

Higher Loading Capacity with SepaFlash™ Spherical Silica Columns

This comparison highlights the superior performance of SepaFlash™ Spherical Silica Columns against competitor columns under the experimental conditions presented in the table below. SepaFlash™ columns offer significant advantages, including high loading capacity, superior resolution, and enhanced separation efficiency. These features not only reduce solvent consumption and minimize purification runs but also provide a cost-effective solution for optimizing your purification workflows.

Experimental Conditions

Experiment using SepaFlash™ Spherical Silica Columns	
Column Size	Experiment #1: 40 g Experiment #2: 12 g
Particle Size	Experiment #1: 25 µm Experiment #2: 15 µm
Sample	Acetophenone & p-methoxyacetophenone
Mobile Phase	80 % hexane and 20 % ethyl acetate
Wavelength	254 nm

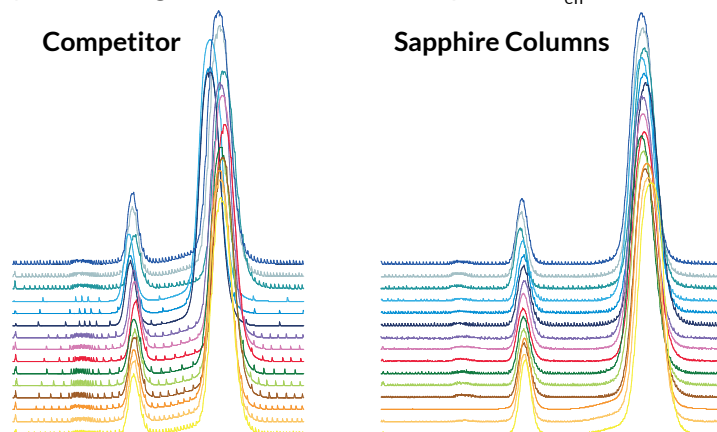


Greater Performance with SepaFlash™ Sapphire Compared to a Gold Series

This experiment compares the performance of the Sapphire series with a Gold series from a competitor. The results demonstrate that the Sapphire columns outperformed the Gold series, delivering a better resolution and more than 50 % higher column efficiency, as measured by the average number of effective plates (N_{eff}).

Experimental Conditions

Experiment using SepaFlash™ Sapphire Spherical Silica Columns	
Column Size	12 g
Sample	Acetophenone & p-methoxyacetophenone
Mobile Phase	80 % hexane and 20 % ethyl acetate
Flow Rate	20 mL/min
Sample Size	0.2 mL
Wavelength	254 nm



Average Observed Chromatographic Parameters


Parameters	Competitor	Sapphire	Sapphire Performance Conclusion
Resolution (R_s)	2.79	3.47	Much better separation
Effective Plates (N_{eff})	73	114	Significantly more efficient
Tailing Factor (T)	1.06	1.05	Slightly better peak shape



SepaFlash™ Column Available Sorbents

Irregular Bare Silica Gels & Aluminas

SepaFlash™ Standard & Large Size columns are available with both bare irregular silica and alumina, offering versatile application options. The table below outlines the sorbent specifications.


Parameters	Irregular Bare Silica Gels and Aluminas				
	5101 	5102	8601, -A*	8601, -B*	8601, -N*
Category Name	Standard	Fusion	Standard	Standard	Standard
Phase	Bare Silica	Bare	Acidic Alumina	Basic Alumina	Neutral Alumina
Particle Shape	Irregular	Irregular	Irregular	Irregular	Irregular
Particle Size	40 - 63 µm	25 - 40 µm	50 - 75 µm	50 - 75 µm	50 - 75 µm
Pore Diameter	60 Å	60 Å	55 Å	55 Å	55 Å
Typical Surface Area	500 m²/g	500 m²/g	155 m²/g	155 m²/g	155 m²/g
pH	6.5 - 7.5	6.5 - 7.5	3.8 - 4.8	9.0 - 10.0	6.5 - 7.5
Loading Capacity	0.1 - 10 %	0.1 - 15 %	0.1 - 4 %	0.1 - 4 %	0.1 - 4 %

* Added at the end of the product number

 Most popular phases

Reversed Phase and CannFlash™ Series

The SepaFlash™ Reversed Phase and CannFlash™ Series columns provide a variety of options with both irregular and spherical functionalized silica gel. The table below presents detailed specifications for each phase, as well as the available column formats for each type of sorbent.

Parameters	Reversed Phase and CannFlash™ Series					
	8201, -IR*	5223, -SP*	8222, -SP* 	5222, -SP(THE)*	5221, -SP*	5223, -SP(AQ)*
Category Name	Reversed Phase	Reversed Phase	Reversed Phase	Reversed Phase	Reversed Phase	Reversed Phase
Phase	C18	C18	C18	C18 THE	C18	C18 Aqueous
Particle Shape	Irregular	Spherical	Spherical	Spherical	Spherical	Spherical
Particle Size	40 - 63 µm	15 µm	20 - 45 µm	20 - 45 µm	40 - 75 µm	15 µm
Pore Diameter	60 Å	100 Å	100 Å	100 Å	100 Å	100 Å
Typical Loading	17 % Carbon	17 % Carbon	17 % Carbon	18.5 % Carbon	17 % Carbon	10 % Carbon
Endcapping	Yes	Yes	Yes	Yes	Yes	Yes
Loading Capacity	0.1 - 2 %	0.1 - 2 %	0.1 - 2 %	0.1 - 2 %	0.1 - 1.5 %	0.1 - 2 %

* Added at the end of the product number

 Most popular phases

Bonded Silica Gels

Additional bonded silica gels are available in SepaFlash™ cartridges, enabling a wide range of applications.

Parameters	Bio and Bonded Series					
	BIO-5272, -SP*	BIO-5872, -SP*	BIO-5472, -SP*	5502, -SP(H)*	5501, -IR*	5922, -SP*
Category Name	Bio	Bio	Bio	Bonded	Bonded	Bonded
Phase	C18	C8	C4	Amino (NH ₂)	Amino (NH ₂)	Diol (HILIC-D)
Particle Shape	Spherical	Spherical	Spherical	Spherical	Irregular	Spherical
Particle Size	20 - 45 µm	20 - 45 µm	20 - 45 µm	20 - 30 µm	40 - 63 µm	20 - 45 µm
Pore Diameter	300 Å	300 Å	300 Å	50 Å	60 Å	100 Å
Typical Loading	6 % Carbon	3 % Carbon	2 % Carbon	1.8 mmol/g	1.3 mmol/g	5 % Carbon
Endcapping	Yes	Yes	Yes	Yes	Yes	Yes
Loading Capacity	0.1 - 1 %	0.1 - 1 %	0.1 - 1 %	0.1 - 3 %	0.1 - 2 %	0.1 - 2 %

* Added at the end of the product number




Please refer to the following pages to explore the available phases for each SepaFlash™ series! Contact us if you need for more products.

Spherical Bare Silica Gels


The SepaFlash™ Large Size Series offers a range of spherical silica gels.

For detailed specifications, please refer to the table below outlining the available silica options.

Parameters	Spherical Bare Silica Gels		
	2101, -SP*	2102, -SP*	2102, -SP(S)* 
Category Name	Platinum	Platinum	Sapphire
Phase	Bare	Bare	Bare
Particle Shape	Spherical	Spherical	Spherical
Particle Size	40 - 75 µm	20 - 45 µm	25 µm
Pore Diameter	70 Å	70 Å	100 Å
Typical Surface Area	500 m ² /g	500 m ² /g	500 m ² /g
pH	6.0 - 8.0	6.0 - 8.0	5.0 - 8.0
Loading Capacity	0.1 - 10 %	0.1 - 15 %	0.1 - 30 %

* Added at the end of the product number

 Most popular phases

Reversed Phase and CannFlash™ Series						Parameters
5222, -SP(AQ)* 	5822, -SP*	5823, -SP(AQ)*	5822, -SP(AQ)*	5422, -SP*	5CAN, -SP*	
Reversed Phase	Reversed Phase	Reversed Phase	Reversed Phase	Reversed Phase	CannFlash™	Category Name
C18 Aqueous	C8	C8 Aqueous	C8 Aqueous	C4 Aqueous	C4-8	Phase
Spherical	Spherical	Spherical	Spherical	Spherical	Spherical	Particle Shape
20 - 45 µm	20 - 45 µm	15 µm	20 - 45 µm	20 - 45 µm	20 - 45 µm	Particle Size
100 Å	100 Å	100 Å	100 Å	100 Å	100 Å	Pore Diameter
10 % Carbon	7 % Carbon	7 % Carbon	7 % Carbon	5.8 % Carbon	10 % Carbon	Typical Loading
Yes	Yes	Yes	Yes	Yes	Yes	Endcapping
0.1 - 2 %	0.1 - 2 %	0.1 - 2 %	0.1 - 2 %	0.1 - 2 %	0.1 - 6 %	Loading Capacity

Bio and Bonded Series						Parameters
5622, -SP*	5322, -SP*	5B22, -SP*	5C22, -SP*	5001, -IR*	5701, -IR*	
Bonded	Bonded	Bonded	Bonded	Bonded	Bonded	Category Name
ARG (HILIC)	Cyano (CN)	Phenyl	Phenyl-Hexyl	SAX	SCX	Phase
Spherical	Spherical	Spherical	Spherical	Irregular	Irregular	Particle Shape
20 - 45 µm	20 - 45 µm	20 - 45 µm	20 - 45 µm	40 - 63 µm	40 - 63 µm	Particle Size
100 Å	100 Å	100 Å	100 Å	60 Å	60 Å	Pore Diameter
6 % Carbon	5.5 % Carbon	10 % Carbon	10 % Carbon	1.3 mmol/g	10 % Carbon	Typical Loading
Yes	Yes	Yes	Yes	Yes	Yes	Endcapping
0.1 - 2 %	0.1 - 2 %	0.1 - 2 %	0.1 - 2 %	0.200 - 0.260 meq/g	0.307 - 0.341 meq/g	Loading Capacity



SepaFlash™ Standard & Large Size Series

Product Overview

SepaFlash™ standard and large size columns are engineered to deliver reliable, high-purity results with exceptional ease and efficiency. Whether purifying milligrams or scaling up to one kilogram, SepaFlash™ offers the ideal solution for fast, straightforward purification. The Luer-Lok™ end fittings ensure compatibility with any flash system, providing a seamless workflow and consistent performance for a smoother purification process.



SepaFlash™ Standard Series

Key Features

Highly Reproducible

SepaFlash™ standard series and large size columns deliver reliable and reproducible results with a proprietary dry packing technique that ensures a uniform sorbent bed. This minimizes channeling, offering tighter bands, better peak definition, and higher resolution for consistent, high-quality purification.

Versatile

SepaFlash™ standard series and large size columns offer versatility with sizes ranging from 4 g to 10 kg, enabling purification from 10 mg to 1 kg. Packed with high-efficiency silica gels, they provide outstanding performance at a cost-effective price, making them ideal for a wide range of purification needs.



SepaFlash™ Large Size

Fully compatible with all instruments on the market!

Column Design

The patented disbursing structure ensures superior flow distribution.

Polyethylene frits prevent media leakage while allowing efficient passage of the mobile phase.

End fittings on both sides protect the media from moisture exposure.

Luer-Lok® end fittings ensure compatibility with any flash systems.

A comprehensive label provides all essential information needed for effective column use.



The innovative one-piece column design withstands pressures up to 300 psi (20.7 bar), guaranteeing 100 % leak-free performance. It is available with a range of irregular and spherical silica gels, aluminas, and other media, all packed with precision using advanced semi-automated dry packing technology for versatile application across various needs.



Column Characteristics

The table below presents the characteristics of the SepaFlash™ Standard & Large Size Series.

Column Code	Typical Sorbent Weight*	Column ID x Length (mm)	Recommended Flow Rate (mL/min)**					Maximum Pressure (psi / bar)
			Bare Irregular Silica Gels	Bare Spherical Silica Gels	All Aluminas	Functionalized Silicas		
						15 µm & 20 - 30/45 µm	40 - 63/75 µm	
004	4 g	12.3 x 97.5	15 - 40	15 - 30	10 - 30	Available in the SepaFlash™ SW (Spin-Welded) Column Series.		300 / 20.7
012	12 g	21.2 x 113.3	30 - 60	25 - 50	15 - 45			
025	25 g	21.2 x 163.1						
040	40 g	26.7 x 165.9	40 - 70	30 - 60	20 - 50			250 / 17.2
080	80 g	30.9 x 242.5	50 - 100	40 - 80	30 - 70			
120	120 g	37.4 x 254.3	60 - 150	45 - 90	40 - 80			
220	220 g	59.8 x 209.3	80 - 220	60 - 120	50 - 120			200 / 13.8
330	330 g	59.8 x 270.3						
800	800 g	78.2 x 382.9	100 - 300	200 - 300	100 - 200			
1600	1,600 g	103.8 x 432.4						
3000	3 kg	127.5 x 509.5	200 - 500	300 - 400	150 - 300	40 - 80	50 - 100	100 / 6.9
5000	5 kg	127.5 x 770.0		350 - 450				
010K	10 kg	172.5 x 850.0	300 - 1,000	400 - 500	200 - 600			

* Typical weight listed in this table is for the bare silica gel. ** Please refer to tables on page 14 & 15 for recommended flow rate per sorbent code.

Using the SepaFlash™ Column: A Step-by-Step Guide

Cartridge Installation

The SepaFlash™ Standard Series columns are designed with universal connectors, ensuring full compatibility with all flash chromatography systems available on the market.

- Securely attach the cartridge to your flash chromatography system, ensuring a proper fit with the connectors.
- Once the cartridge is installed, refer to the user guide of the system and follow the provided instructions for optimal setup and operation.

Note: Keep end caps on when not in use; remove only for installation.

Sample Loading

The solubility of the compound determines whether to use liquid or dry loading when introducing the sample onto the SepaFlash™ column.

- Liquid loading** involves dissolving the sample in the minimum amount of the weakest possible solvent. The dissolved sample is then added to the top of the SepaFlash™ column or introduced via the sample injector using a syringe.
- Dry loading** is recommended when the sample has limited solubility in weak solvents. In this case, a stronger solvent is used to fully dissolve the sample, which is then pre-adsorbed onto a small quantity of sorbent. After evaporating the solvent using a rotary evaporator, the sample-sorbent mixture is loaded into an empty SepaFlash™ iLOK™ empty solid-load cartridge, which is placed on top of the flash column or directly on the 15 % free space of the SepaFlash™ iLOK™-SL openable column (twist-cap).



Typical Column Characteristics for the Standard & Large Size Series

Bare Silica Gels & Aluminas

The table below presents the characteristics of the SepaFlash™ Standard column series.

Column Code	Sorbent	Description of the Sorbent	Sorbent Code	Typical Silica Weight	Typical Column Volume (mL)	Flow Rate (mL/min)
0004	Silica	Irregular 40 - 63 µm, 60 Å	5101	4 g	6	15 - 40
		Spherical 25 µm, 100 Å	2102-SP(S)	4 g	6	15 - 30
	Alumina	Irregular 50 - 75 µm, 55 Å	8601-A, -B & -C	8 g	6	10 - 30
0012	Silica	Irregular 40 - 63 µm, 60 Å	5101	12 g	20	30 - 60
		Spherical 25 µm, 100 Å	2102-SP(S)	13 g	24	25 - 50
	Alumina	Irregular 50 - 75 µm, 55 Å	8601-A, -B & -C	24 g	20	15 - 45
0025	Silica	Irregular 40 - 63 µm, 60 Å	5101	25 g	32	30 - 60
		Spherical 25 µm, 100 Å	2102-SP(S)	21 g	40	25 - 50
	Alumina	Irregular 50 - 75 µm, 55 Å	8601-A, -B & -C	50 g	30	15 - 45
0040	Silica	Irregular 40 - 63 µm, 60 Å	5101	40 g	50	40 - 70
		Spherical 25 µm, 100 Å	2102-SP(S)	32 g	58	30 - 60
	Alumina	Irregular 50 - 75 µm, 55 Å	8601-A, -B & -C	80 g	48	20 - 50
0080	Silica	Irregular 40 - 63 µm, 60 Å	5101	80 g	110	50 - 100
		Spherical 25 µm, 100 Å	2102-SP(S)	70 g	127	40 - 80
	Alumina	Irregular 50 - 75 µm, 55 Å	8601-A, -B & -C	160 g	105	30 - 70
0120	Silica	Irregular 40 - 63 µm, 60 Å	5101	120 g	155	60 - 150
		Spherical 25 µm, 100 Å	2102-SP(S)	108 g	186	45 - 90
	Alumina	Irregular 50 - 75 µm, 55 Å	8601-A, -B & -C	240 g	145	40 - 80
0220	Silica	Irregular 40 - 63 µm, 60 Å	5101	220 g	280	80 - 220
		Spherical 25 µm, 100 Å	2102-SP(S)	202 g	358	60 - 120
	Alumina	Irregular 50 - 75 µm, 55 Å	8601-A, -B & -C	440 g	260	50 - 120
0330	Silica	Irregular 40 - 63 µm, 60 Å	5101	330 g	430	80 - 220
		Spherical 25 µm, 100 Å	2102-SP(S)	282 g	501	60 - 120
	Alumina	Irregular 50 - 75 µm, 55 Å	8601-A, -B & -C	660 g	405	50 - 120
0800	Silica	Irregular 40 - 63 µm, 60 Å	5101	800 g	1,050	100 - 300
		Spherical 25 µm, 100 Å	2102-SP(S)	708 g	1,235	200 - 300
	Alumina	Irregular 50 - 75 µm, 55 Å	8601-A, -B & -C	1.6 kg	860	100 - 200
1600	Silica	Irregular 40 - 63 µm, 60 Å	5101	1.6 kg	2,000	200 - 500
		Spherical 25 µm, 100 Å	2102-SP(S)	1.4 kg	2,468	200 - 300
	Alumina	Irregular 50 - 75 µm, 55 Å	8601-A, -B & -C	3.2 kg	1,680	150 - 300
3000	Silica	Irregular 40 - 63 µm, 60 Å	5101	3.0 kg	3,850	200 - 500
		Spherical 25 µm, 100 Å	2102-SP(S)	2.6 kg	4,626	300 - 400
	Alumina	Irregular 50 - 75 µm, 55 Å	8601-A, -B & -C	6.0 kg	3,250	150 - 300
5000	Silica	Irregular 40 - 63 µm, 60 Å	5101	5.0 kg	6,450	200 - 500
		Spherical 25 µm, 100 Å	2102-SP(S)	4.4 kg	7,709	350 - 450
	Alumina	Irregular 50 - 75 µm, 55 Å	8601-A, -B & -C	10.0 kg	3,675	150 - 300
010K	Silica	Irregular 40 - 63 µm, 60 Å	5101	10.0 kg	13,000	300 - 1,000
		Spherical 25 µm, 100 Å	2102-SP(S)	8.8 kg	15,415	400 - 500
	Alumina	Irregular 50 - 75 µm, 55 Å	8601-A, -B & -C	20.0 kg	7,349	200 - 600

Typical Column Characteristics for the Large Size Series

Bare Silica Gels

The table below outlines the characteristics of the SepaFlash™ Large Size Series, packed with bare silica gels.

Column Code	Series	Description of Bare Silica Gels	Sorbent Code	Typical Silica Weight	Typical Column Volume (mL)	Flow Rate (mL/min)
800	Platinum	Spherical 40 - 75 µm, 70 Å	2101-SP	800 g	1,207	50 - 100
	Fusion	Spherical 20 - 45 µm, 70 Å	2102-SP		1,034	
	Platinum	Irregular 25 - 45 µm, 60 Å	5102		1,186	
1600	Platinum	Spherical 40 - 75 µm, 70 Å	2101-SP	1,600 g	2,414	
	Fusion	Spherical 20 - 45 µm, 70 Å	2102-SP		2,069	
	Platinum	Irregular 25 - 45 µm, 60 Å	5102		2,373	
3000	Platinum	Spherical 40 - 75 µm, 70 Å	2101-SP	3 kg	4,343	
	Fusion	Spherical 20 - 45 µm, 70 Å	2102-SP		3,685	
	Platinum	Irregular 25 - 45 µm, 60 Å	5102		4,224	
5000	Platinum	Spherical 40 - 75 µm, 70 Å	2101-SP	5 kg	7,543	
	Fusion	Spherical 20 - 45 µm, 70 Å	2102-SP		6,466	
	Platinum	Irregular 25 - 45 µm, 60 Å	5102		7,415	
010K	Platinum	Spherical 40 - 75 µm, 70 Å	2101-SP	10 kg	15,086	
	Fusion	Spherical 20 - 45 µm, 70 Å	2102-SP		12,931	
	Platinum	Irregular 25 - 45 µm, 60 Å	5102		14,077	

Functionalized Silica Gels

The table below presents the characteristics of the SepaFlash™ Large Size columns packed with functionalized silica gels.

Column Code	Description of Functionalized Silica Gels	Typical Silica Weight (g)	Typical Column Volume (mL)	Flow Rate (mL/min)
800	Irregular 40 - 63 µm, 60 Å / Spherical 40 - 75 µm, 70 Å	840 / 850	1,086 / 1,099	50 - 100
	Spherical 15 µm, 100 Å / Spherical 20 - 45 µm, 300 Å (Bio series)	840 / 755	1,159 / 976	40 - 80
	Spherical 20 - 45 µm, 100 Å, C18, C8, & C4 / ARG, CN, & PHE	863	1,352 / 1,222	
1600	Irregular 40 - 63 µm, 60 Å / Spherical 40 - 75 µm, 70 Å	1,980 / 1,660	2,458 / 2,576	50 - 100
	Spherical 15 µm, 100 Å / Spherical 20 - 45 µm, 300 Å (Bio series)	1,680 / 1,748	2,317 / 2,260	40 - 80
	Spherical 20 - 45 µm, 100 Å, C18, C8, & C4 / ARG, CN, & PHE	1,726	2,731 / 2,444	
3000	Irregular 40 - 63 µm, 60 Å / Spherical 40 - 75 µm, 70 Å	3,800 / 3,188	4,717 / 4,122	50 - 100
	Spherical 15 µm, 100 Å / Spherical 20 - 45 µm, 300 Å (Bio series)	3,150 / 3,268	4,345 / 4,226	40 - 80
	Spherical 20 - 45 µm, 100 Å, C18, C8, & C4 / ARG, CN, & PHE	3,600 / 3,323	5,241 / 4,583	
5000	Irregular 40 - 63 µm, 60 Å / Spherical 40 - 75 µm, 70 Å	6,300 / 5,250	7,821 / 6,789	50 - 100
	Spherical 15 µm, 100 Å	5,248	7,239	40 - 80
	Spherical 20 - 45 µm, 100 Å, C18, C8, & C4	6,300	8,690	
010K	Irregular 40 - 63 µm, 60 Å / Spherical 40 - 75 µm, 70 Å	12,600 / 10,490	15,641 / 13,565	50 - 100
	Spherical 15 µm, 100 Å	10,492	14,472	40 - 80
	Spherical 20 - 45 µm, 100 Å, C18, C8, & C4	12,600	17,379	



SepaFlash™ HP & Functionalized Series

Product Overview

These SepaFlash™ HP & Functionalized series (also called **SW series**) provide efficient and scalable chromatography solutions, enabling purification from milligrams to multiple kilograms. These high-performance columns, with spin-welded construction (4 g to 330 g), withstand pressures up to 400 psi, while Luer-Lok® fittings ensure easy stacking and compatibility with any flash system.

Available in irregular (Fusion series) and spherical (Platinum and Sapphire series) silica gel, they offer superior resolution and solvent savings. The Fusion Series is ideal for non-sticky, non-viscous mixtures, while the Sapphire series supports up to 30 % more sample loading. These series offer the ideal balance of performance and versatility for all chromatography needs.



SepaFlash™ HP Series



SepaFlash™ Bio Series

Key Features

High Performance

The high-purity silica gel, smaller particle sizes, and high back-pressure tolerance make these columns highly efficient, delivering superior performance even in challenging separations.

Solvent Saving

Smaller particle sizes enable faster separations and reduce solvent consumption by up to 50 %, reducing run times by half and lowering costs by 20 - 40 %, while also being environmentally friendly.



SepaFlash™ Bonded Series

Fully compatible with all instruments on the market!

Column Design

The patented disbursing structure ensures superior flow distribution.

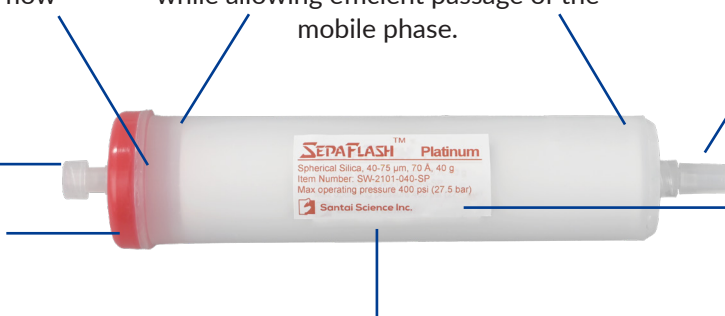
Luer-Lok® end fittings ensure compatibility with any flash systems.

Color-coded caps for quick and easy sorbent identification.

Polyethylene frits prevent media leakage while allowing efficient passage of the mobile phase.

End fittings on both sides protect the media from moisture exposure.

A comprehensive label provides all essential information needed for effective column use.



The innovative one-piece column design withstands pressures up to 400 psi (27.6 bar), guaranteeing 100 % leak-free performance. It is available with a range of irregular and spherical silica gels, aluminas, and other media, all packed with precision using advanced semi-automated dry packing technology for versatile application across various needs.

Column Characteristics

The table below presents the characteristics of the SepaFlash™ Column - HP & Functionalized series.

Column Code	Typical Sorbent Weight*	Column ID x Length (mm)	Recommended Flow Rate (mL/min)**				Maximum Pressure (psi / bar)
			Bare Silicas		Functionalized Silicas		
			25 µm, 50 µm & 20/25 - 45 µm	40 - 75 µm	15 µm & 20 - 30/45 µm	40 - 63/75 µm	
004	4 g	12.4 x 113.8	15 - 30	15 - 40	5 - 15	10 - 20	400 / 27.5
012	12 g	21.4 x 134.8	20 - 50	30 - 60	10 - 25	15 - 30	
025	25 g	21.4 x 184.0					
040	40 g	26.7 x 184.4	30 - 60	40 - 70	15 - 30	20 - 40	
080	80 g	31.2 x 257.4	40 - 80	50 - 100	20 - 50	30 - 60	350 / 24.0
120	120 g	38.6 x 261.5	45 - 90	60 - 150	30 - 60	40 - 80	300 / 20.7
220	220 g	61.4 x 223.5	60 - 120	80 - 220	40 - 80	50 - 100	
330	330 g	61.4 x 280.2					
800	800 g	78.2 x 382.9					
1600	1,600 g	103.8 x 432.4					
3000	3 kg	127.5 x 509.5	50 - 100	50 - 100			100 / 6.9
5000	5 kg	127.5 x 770.0					
010K	10 kg	172.5 x 850.0					

* Typical weight listed in this table is for the bare silica gel. ** Please refer to tables on page 18 & 19 for recommended flow rate per sorbent code.

Using the SepaFlash™ Column: A Step-by-Step Guide

Cartridge Installation

SepaFlash™ HP & Functionalized columns fit all flash systems. Keep end caps on when not in use; remove only for installation. Attach securely and follow your system's user guide for setup.

Sample Loading

The solubility of the compound determines whether to use liquid or dry loading when introducing the sample onto the SepaFlash™ column.

- **Liquid loading** involves dissolving the sample in the minimum amount of the weakest possible solvent. The dissolved sample is then added to the top of the SepaFlash™ column or introduced via the sample injector using a syringe.
- **Dry loading** is ideal for samples with low solubility in weak solvents. A strong solvent dissolves the sample, which is pre-adsorbed onto sorbent. After solvent evaporation, the mixture is loaded into a SepaFlash™ iLOK™ solid-load cartridge or the 15 % free space of an iLOK™-SL openable column

Cleaning & Storage Conditions

Proper cleaning and storage are essential for reusing SepaFlash HP & Functionalized Series columns effectively. When storing the columns for an extended period, follow these steps to ensure proper separation efficiency:

1. **Prevent drying:** after the first use, do not allow the column to dry out. Ensure the air purge on the instrument is turned off.
2. **Use intermediate solvents when necessary:** if the run solvents are immiscible with the storage solvents, rinse the column with an intermediate solvent.
3. **Remove organic solvents:** flush the column with 3 column volumes of the following solutions to remove organic modifiers or strong organic solvents:
 - For reversed phase columns: 50 % methanol or acetonitrile in water.
 - For normal phase columns: 80 % acetonitrile in water or 100 % isopropanol.
4. **Store properly:** fill the column with the recommended solvent (e.g., 80 - 90 % acetonitrile, methanol, or ethanol in water), and secure both end caps.



Typical Column Characteristics for Bare Silica Gels

The table below presents the characteristics of the SepaFlash™ HP series packed with various bare silica gels.

Column Code	Series	Description of Bare Silica Gels	Sorbent Code	Typical Silica Weight	Typical Column Volume (mL)	Flow Rate (mL/min)
004	Platinum	Spherical 40 - 75 µm, 70 Å	2101-SP	4 g	5	15 - 40
	Fusion	Spherical 20 - 45 µm, 70 Å	2102-SP			
	Platinum	Irregular 25 - 45 µm, 60 Å	5102		8	15 - 30
	Sapphire	Spherical 25 µm, 100 Å	2102-SP(S)			
012	Platinum	Spherical 40 - 75 µm, 70 Å	2101-SP	12 g	19	30 - 60
	Fusion	Spherical 20 - 45 µm, 70 Å	2102-SP			
	Platinum	Irregular 25 - 45 µm, 60 Å	5102		24	25 - 50
	Sapphire	Spherical 25 µm, 100 Å	2102-SP(S)			
025	Platinum	Spherical 40 - 75 µm, 70 Å	2101-SP	25 g	32	30 - 60
	Fusion	Spherical 20 - 45 µm, 70 Å	2102-SP			
	Platinum	Irregular 25 - 45 µm, 60 Å	5102		39	25 - 50
	Sapphire	Spherical 25 µm, 100 Å	2102-SP(S)			
040	Platinum	Spherical 40 - 75 µm, 70 Å	2101-SP	40 g	48	40 - 70
	Fusion	Spherical 20 - 45 µm, 70 Å	2102-SP			
	Platinum	Irregular 25 - 45 µm, 60 Å	5102		52	30 - 60
	Sapphire	Spherical 25 µm, 100 Å	2102-SP(S)			
080	Platinum	Spherical 40 - 75 µm, 70 Å	2101-SP	80 g	108	50 - 100
	Fusion	Spherical 20 - 45 µm, 70 Å	2102-SP			
	Platinum	Irregular 25 - 45 µm, 60 Å	5102		120	40 - 80
	Sapphire	Spherical 25 µm, 100 Å	2102-SP(S)			
120	Platinum	Spherical 40 - 75 µm, 70 Å	2101-SP	120 g	160	60 - 150
	Fusion	Spherical 20 - 45 µm, 70 Å	2102-SP			
	Platinum	Irregular 25 - 45 µm, 60 Å	5102		180	45 - 90
	Sapphire	Spherical 25 µm, 100 Å	2102-SP(S)			
220	Platinum	Spherical 40 - 75 µm, 70 Å	2101-SP	220 g	303	80 - 220
	Fusion	Spherical 20 - 45 µm, 70 Å	2102-SP			
	Platinum	Irregular 25 - 45 µm, 60 Å	5102		320	60 - 120
	Sapphire	Spherical 25 µm, 100 Å	2102-SP(S)			
330	Platinum	Spherical 40 - 75 µm, 70 Å	2101-SP	330 g	420	80 - 220
	Fusion	Spherical 20 - 45 µm, 70 Å	2102-SP			
	Platinum	Irregular 25 - 45 µm, 60 Å	5102		450	60 - 120
	Sapphire	Spherical 25 µm, 100 Å	2102-SP(S)			
800	Platinum	Spherical 40 - 75 µm, 70 Å	2101-SP	800 g	1,207	
	Fusion	Spherical 20 - 45 µm, 70 Å	2102-SP		1,034	
	Platinum	Irregular 25 - 45 µm, 60 Å	5102		1,186	
	Sapphire	Spherical 25 µm, 100 Å	2102-SP(S)		1,172 / 1,207	
1600	Platinum	Spherical 40 - 75 µm, 70 Å	2101-SP	1,600 g	2,414	
	Fusion	Spherical 20 - 45 µm, 70 Å	2102-SP		2,069	
	Platinum	Irregular 25 - 45 µm, 60 Å	5102		2,373	
	Sapphire	Spherical 25 µm, 100 Å	2102-SP(S)		2,345 / 2,414	
3000	Platinum	Spherical 40 - 75 µm, 70 Å	2101-SP	3 kg	4,343	50 - 100
	Fusion	Spherical 20 - 45 µm, 70 Å	2102-SP		3,685	
	Platinum	Irregular 25 - 45 µm, 60 Å	5102		4,224	
	Sapphire	Spherical 25 µm, 100 Å	2102-SP(S)		4,521 / 4,526	
5000	Platinum	Spherical 40 - 75 µm, 70 Å	2101-SP	5 kg	7,543	
	Fusion	Spherical 20 - 45 µm, 70 Å	2102-SP		6,466	
	Platinum	Irregular 25 - 45 µm, 60 Å	5102		7,415	
	Sapphire	Spherical 25 µm, 100 Å	2102-SP(S)		7,328 / 7,392	
010K	Platinum	Spherical 40 - 75 µm, 70 Å	2101-SP	10 kg	15,086	
	Fusion	Spherical 20 - 45 µm, 70 Å	2102-SP		12,931	
	Platinum	Irregular 25 - 45 µm, 60 Å	5102		14,077	
	Sapphire	Spherical 25 µm, 100 Å	2102-SP(S)		15,071 / 15,690	



Typical Column Characteristics for Functionalized Silica Gels

The table below presents the characteristics of the SepaFlash™ spin-welded and large size columns packed with functionalized silica gels.

Column Code	Description of Functionalized Silica Gels	Typical Silica Weight (g)	Typical Column Volume (mL)	Flow Rate (mL/min)
004	Irregular 40 - 63 µm, 60 Å / Spherical 40 - 75 µm, 70 Å	5.9 / 4.6	3.6 / 6	10 - 20
	Spherical 15 µm, 100 Å / Spherical 20 - 45 µm, 300 Å (Bio series)	4.2 / 4.5	6	
	Spherical 20 - 45 µm, 100 Å, C18, C8, & C4 / ARG, CN, & PHE	5.4	7 / 4.3	5 - 15
	Spherical 20 - 30 µm, 50 Å (NH ₂)	5.9	9	
012	Irregular 40 - 63 µm, 60 Å / Spherical 40 - 75 µm, 70 Å	23 / 18	14 / 23	15 - 30
	Spherical 15 µm, 100 Å / Spherical 20 - 45 µm, 300 Å (Bio series)	16	22	
	Spherical 20 - 45 µm, 100 Å, C18, C8, & C4 / ARG, CN, & PHE	20	23 / 16	10 - 25
	Spherical 20 - 30 µm, 50 Å (NH ₂)	23	35	
025	Irregular 40 - 63 µm, 60 Å / Spherical 40 - 75 µm, 70 Å	38 / 30	23 / 39	15 - 30
	Spherical 15 µm, 100 Å / Spherical 20 - 45 µm, 300 Å (Bio series)	27 / 26	37 / 34	
	Spherical 20 - 45 µm, 100 Å, C18, C8, & C4 / ARG, CN, & PHE	33	43 / 26	10 - 25
	Spherical 20 - 30 µm, 50 Å (NH ₂)	38	57	
040	Irregular 40 - 63 µm, 60 Å / Spherical 40 - 75 µm, 70 Å	55 / 43	33 / 56	20 - 40
	Spherical 15 µm, 100 Å / Spherical 20 - 45 µm, 300 Å (Bio series)	38.5 / 38	53 / 49	
	Spherical 20 - 45 µm, 100 Å, C18, C8, & C4 / ARG, CN, & PHE	48	68 / 38	15 - 30
	Spherical 20 - 30 µm, 50 Å (NH ₂)	55	83	
080	Irregular 40 - 63 µm, 60 Å / Spherical 40 - 75 µm, 70 Å	122 / 95	70 / 123	30 - 60
	Spherical 15 µm, 100 Å / Spherical 20 - 45 µm, 300 Å (Bio series)	86 / 82	119 / 106	
	Spherical 20 - 45 µm, 100 Å, C18, C8, & C4 / ARG, CN, & PHE	105	141 / 83	20 - 50
	Spherical 20 - 30 µm, 50 Å (NH ₂)	122	184	
120	Irregular 40 - 63 µm, 60 Å / Spherical 40 - 75 µm, 70 Å	180 / 142	103 / 184	40 - 80
	Spherical 15 µm, 100 Å / Spherical 20 - 45 µm, 300 Å (Bio series)	128 / 120	176 / 155	
	Spherical 20 - 45 µm, 100 Å, C18, C8, & C4 / ARG, CN, & PHE	155	213 / 122	30 - 60
	Spherical 20 - 30 µm, 50 Å (NH ₂)	180	272	
220	Irregular 40 - 63 µm, 60 Å / Spherical 40 - 75 µm, 70 Å	340 / 265	195 / 343	50 - 100
	Spherical 15 µm, 100 Å / Spherical 20 - 45 µm, 300 Å (Bio series)	244 / 225	337 / 291	
	Spherical 20 - 45 µm, 100 Å, C18, C8, & C4 / ARG, CN, & PHE	300	414 / 236	40 - 80
	Spherical 20 - 30 µm, 50 Å (NH ₂)	340	513	
330	Irregular 40 - 63 µm, 60 Å / Spherical 40 - 75 µm, 70 Å	475 / 385	272 / 458	50 - 100
	Spherical 15 µm, 100 Å / Spherical 20 - 45 µm, 300 Å (Bio series)	365 / 320	503 / 414	
	Spherical 20 - 45 µm, 100 Å, C18, C8, & C4 / ARG, CN, & PHE	420	552 / 331	40 - 80
	Spherical 20 - 30 µm, 50 Å (NH ₂)	475	717	
800	Irregular 40 - 63 µm, 60 Å / Spherical 40 - 75 µm, 70 Å	840 / 850	1,086 / 1,099	50 - 100
	Spherical 15 µm, 100 Å / Spherical 20 - 45 µm, 300 Å (Bio series)	840 / 755	1,159 / 976	
	Spherical 20 - 45 µm, 100 Å, C18, C8, & C4 / ARG, CN, & PHE	863	1,352 / 1,222	40 - 80
1600	Irregular 40 - 63 µm, 60 Å / Spherical 40 - 75 µm, 70 Å	1,980 / 1,660	2,458 / 2,576	50 - 100
	Spherical 15 µm, 100 Å / Spherical 20 - 45 µm, 300 Å (Bio series)	1,680 / 1,748	2,317 / 2,260	
	Spherical 20 - 45 µm, 100 Å, C18, C8, & C4 / ARG, CN, & PHE	1,726	2,731 / 2,444	40 - 80
3000	Irregular 40 - 63 µm, 60 Å / Spherical 40 - 75 µm, 70 Å	3,800 / 3,188	4,717 / 4,122	50 - 100
	Spherical 15 µm, 100 Å / Spherical 20 - 45 µm, 300 Å (Bio series)	3,150 / 3,268	4,345 / 4,226	
	Spherical 20 - 45 µm, 100 Å, C18, C8, & C4 / ARG, CN, & PHE	3,600 / 3,323	5,241 / 4,583	40 - 80
5000	Irregular 40 - 63 µm, 60 Å / Spherical 40 - 75 µm, 70 Å	6,300 / 5,250	7,821 / 6,789	50 - 100
	Spherical 15 µm, 100 Å	5,248	7,239	
	Spherical 20 - 45 µm, 100 Å, C18, C8, & C4	6,300	8,690	40 - 80
010K	Irregular 40 - 63 µm, 60 Å / Spherical 40 - 75 µm, 70 Å	12,600 / 10,490	15,641 / 13,565	50 - 100
	Spherical 15 µm, 100 Å	10,492	14,472	
	Spherical 20 - 45 µm, 100 Å, C18, C8, & C4	12,600	17,379	40 - 80



SepaFlash™ iLOK™ & iLOK™-SL Series

Product Overview

SepaFlash™ iLOK™ cartridges offer flexible solid and liquid loading options, available pre-packed or empty with screw caps, and withstand up to 200 psi (13.8 bar).

The iLOK™-SL (Twist-Cap) version provides 15 % free space for solid loading or with an inserter for liquid injection.

SepaFlash™ iLOK™ III large-size solid-load cartridges are easy to assemble, handle high sample loads, and support demanding applications. Available in five sizes (800 g to 7 kg) with a 100 psi (6.9 bar) rating, they are compatible with most high-flow systems and adaptable to various tubing diameters.

Key Features

■ Innovative Design

The innovative patented design of SepaFlash™ iLOK™ cartridges enables easy manual assembly and offers versatility in sample loading methods, supporting both solid loading and direct liquid injection.

■ Highly Reproducible

Our exclusive, proprietary dry-packing technique ensures high resolution and reproducibility, making it ideal for routine purifications.



SepaFlash™ iLOK™
Empty Solid-Load Cartridge Series



SepaFlash™ iLOK™ & iLOK™-SL
Pre-packed Solid-Load Cartridge Series



SepaFlash™ iLOK™ III Large-Size
Empty Solid-Load Cartridge Series

Fully compatible with all instruments on the market!

iLOK™ Column Design

The patented disbursing structure ensures superior flow distribution.

Polyethylene frits prevent media leakage while allowing efficient passage of the mobile phase.

End fittings on both sides protect the media from moisture exposure.

Luer-Lok® end fittings ensure compatibility with any flash systems.

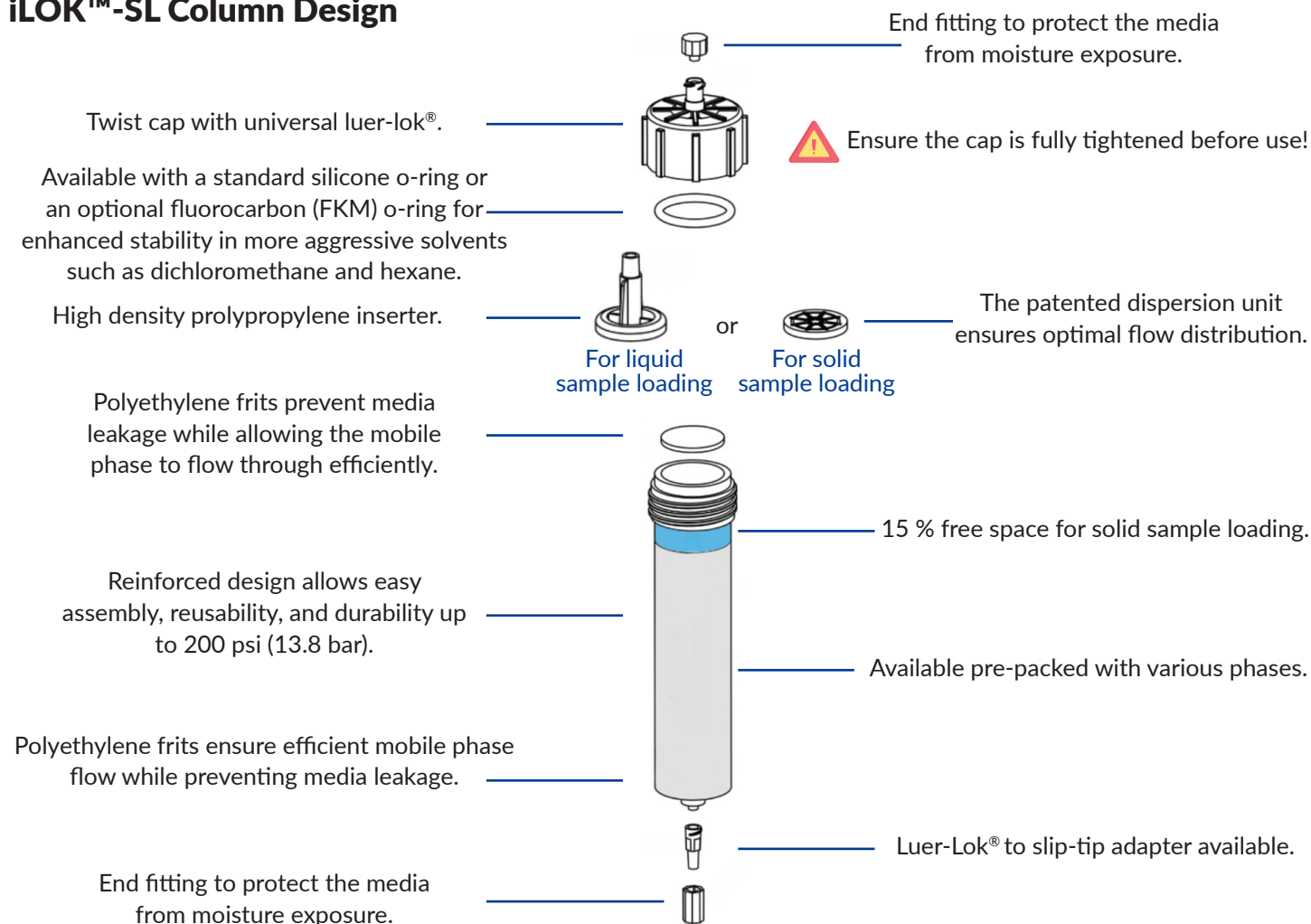
Available in two formats: empty or pre-packed with various phases.



The innovative reinforced column design allows for easy manual assembly and reusability, providing durability under pressures up to 200 psi (13.8 bar). Ensure the cap is fully tightened before use.



iLOK™-SL Column Design



Column Characteristics

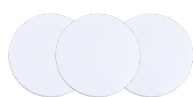
The table below presents the characteristics of the SepaFlash™ Cartridges - iLOK™ & iLOK™-SL series.

Column Code	Column Size	Column ID x Length (mm)	Sample Size (g)	Volume (mL)	Recommended Flow Rate (mL/min)	Maximum Pressure (psi / bar)
Small Size Formats (available empty and pre-packed)						
004	4 g	12.8 x 60	0.004 - 0.400	8	15 - 40	200 / 13.8
012	12 g	21.8 x 76	0.012 - 1.200	27	30 - 60	
025	25 g	21.6 x 126	0.025 - 2.500	46	40 - 70	
040	40 g	26.8 x 125	0.040 - 4.000	70	60 - 150	
060	60 g	36.6 x 99	0.060 - 6.000	104	50 - 100	
080	80 g	31.2 x 193	0.080 - 8.000	147	80 - 220	150 / 10.3
100	100 g	60.4 x 61	0.100 - 10.000	176	60 - 150	200 / 13.8
120	120 g	36.6 x 204	0.120 - 12.000	215	80 - 220	150 / 10.3
220	220 g	60.6 x 131	0.220 - 22.000	377		
330	330 g	60.6 x 187	0.330 - 33.000	539		
Large-Size Formats (Available only as empty cartridges. Sample size and flow rate are provided for reference and may require adjustments.)						
0800B-1	800 g	127 x 140	0.8 - 80.0	1,395	200 - 400	100 / 6.9
1600B-1	1,600 g	127 x 250	1.6 - 160.0	2,760		
3000B-1	3 kg	127 x 440	3.0 - 300.0	5,165		
5000B-1	5 kg	127 x 692	5.0 - 500.0	8,610	200 - 500	
7000B-1	7 kg	127 x 1,000	7.0 - 700.0	12,510		



SepaFlash™ iLOK™ Empty Cartridges: Three Application Options

The SepaFlash™ iLOK™ empty cartridges are a versatile product that can be used as a solid-load column, a chromatographic column, or in a combined application for both purposes. These products are supplied as a complete package, including a column tube, screw cap, o-ring, frits (x3), and end caps. Optional frit insertion rod and closing screw cap tools are available. We also offer pre-packed iLOK™ cartridges for those seeking a ready-to-use solution.



Polyethylene
frits



Silicone or fluorocarbon
(FKM) o-ring



Frit insertion rod tool
(various sizes available)



Cap screwing tool
(two sizes available)

Using the SepaFlash™ iLOK™ Cartridges: A Step-by-Step Guide

Step 1:

Unscrew and remove the cap from the iLOK™ empty column tube, remove the frit, and place the column tube on a support stand.



Step 2:

Fill the column tube with silica gel mixed with the sample (for solid-load), the adsorbent (for chromatographic column) or with 85 % of silica (for combined application as shown on the picture). Tap gently to settle and avoid overfilling.



Step 3:

Place the frit on the top of the column tube.



Step 4:

Use the insertion tool to press the frit into the column tube, ensuring the frit is as straight as possible.



**Complete the next two steps only for the combined application.
For solid-load or chromatographic column use, proceed directly to Step 7.**

Step 5:

Add the silica gel mixed with the sample to the top of the column (blue section), gently tap to settle and place the second frit on the column tube.



Step 6:

Use the insertion tool to press the frit into the column tube, ensuring the frit is as straight as possible.



Step 7:

Finally, securely fasten the column by fully tightening it with the cap screwing closing tool.



Step 8:

Your SepaFlash™ iLOK™ cartridge is now ready for use. It is recommended to perform a pre-equilibration step with 3 - 5 column volumes before loading your sample.



Ensure the cap is fully tightened before use!

SepaFlash™ iLOK™-SL

Each SepaFlash™ iLOK™-SL cartridge features a built-in inserter for convenient liquid injection with a syringe.

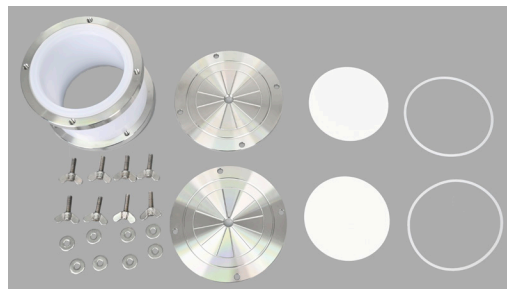
For solid loading, remove the inserter and follow steps 5 to 8 as outlined above, replacing the frit with the dispersion unit at step 6.



SepaFlash™ iLOK™ III Large-Size Empty Solid-Load Cartridges

The SepaFlash™ iLOK™ III large-size empty solid-load cartridges are designed for easy manual assembly and accommodate higher sample loads, making them ideal for demanding applications. Available in five sizes (800 g, 1,600 g, 3 kg, 5 kg, and 7 kg), these cartridges are compatible with most high-flow flash chromatography systems. Adapters are also available to accommodate tubing of various outer diameters.

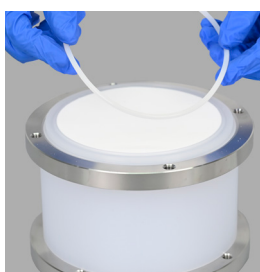
The iLOK™ III large-size empty solid-load cartridge offers a practical and cost-effective solution. The iLOK™ III empty solid-load cartridge features reusable stainless steel components (end caps (x2), retaining rings (x2), and washers & butterfly screw bolts (x8)) ensuring long-term use and cost efficiency. Disposable parts, including the column tube (x1), frits (x2), and sealing rings (x2), can be replaced as needed after contamination, offering convenience and reduced operational costs.



Using the SepaFlash™ iLOK™ III Large-Size Empty Solid-Load Cartridges: A Step-by-Step Guide

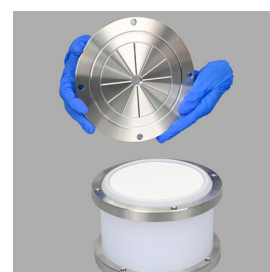
Step 1:

Put the column on a stable surface. Position the frit at the opening of the column tube, then press it into the tube in a single direction until it sits flat. Place the sealing ring in the groove of the column tube.



Step 2:

Place the end cap on the top of the sealing ring.



Step 3:

Insert the washer and the butterfly screw bolt into each of the four (4) holes.



Step 4:

Hand-tighten the four (4) butterfly bolts to firmly secure the end cover.



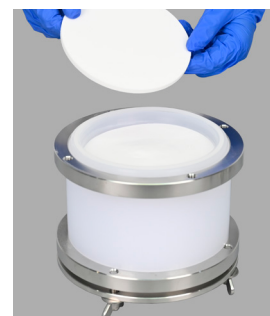
Step 5:

Flip the column onto the bench and fill the tube with the appropriate chromatographic media or solid sample as needed.



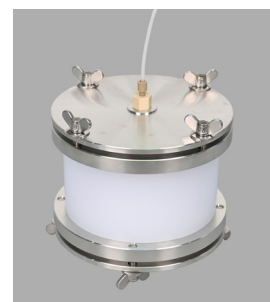
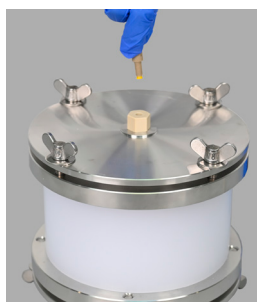
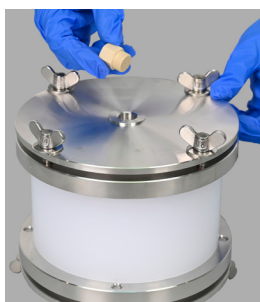
Step 6:

Place the top frit evenly on the packed media bed, ensuring it is aligned horizontally. Then repeat steps 2 through 4 precisely.



Step 7:

Connect the tubing adapters to the cartridge's inlet and outlet, selecting the appropriate size (1/8-inch, 3/16-inch, 1/4-inch, or 3/8-inch OD).



BLL-0506-XXX-2: Adapter kit for SD800 - SD7000

Where XXX is:

- 032 for 1/8-inch
- 048 for 3/16-inch
- 064 for 1/4-inch



Ordering Information

This section will guide you in building your SepaFlash™ Column product number. Each number follows the structure:

Standard & Large Size Series

S-[Phase Code]-[Column Code]



Ex: SepaFlash™ Column - Standard Series, Irregular Silica, 40 - 63 μm , 60 Å, 330 g: **S-5101-0330**
SepaFlash™ Column - Standard Series, Neutral Alumina, 50 - 75 μm , 55 Å, 40 g: **S-8601-0040-N**
SepaFlash™ Column - HP Platinum Series, 40 - 75 μm , 70 Å, 330 g: **SW-2101-0330-SP**

HP & Functionalized Series

SW-[Phase Code]-[Column Code]



Ex: SepaFlash™ Column - HP Platinum Series, Spherical Silica, 40 - 75 μm , 70 Å, 25 g: **SW-2101-0025-SP**
SepaFlash™ Column - Reversed Phase Series, Spherical C18, 20 - 45 μm , 100 Å, 4 g: **SW-8222-004-SP**

iLOK™ & iLOK™-SL Series

[SD or SL]-[Phase Code]*-[Column Code]



Ex: SepaFlash™ iLOK™ Empty Solid-Load Cartridges, 120 g (with screw cap, frits, disbursing unit, O-ring and end tips): **SD-0000-120**
SepaFlash™ iLOK™-SL Cartridges, High-Efficiency, Spherical C18, 20 - 45 μm , 100 Å, 4 g: **SL-8222-004-SP**

* Please use phase code "0000" for empty cartridges.

We take pride in being the only company that allows customers to purchase the exact number of units they need, providing flexibility tailored to your specific requirements.



Available Accessories

The table below highlights the most popular accessories for the SepaFlash™ iLOK™ and iLOK™-SL (SL) series.

Item Number	Description	Qty / Box
Top Frit (16 - 20 µm) for iLOK™ Series		
PF-113-SD-004	Top frit for 4 g iLOK™	50
PF-113-SD-012	Top frit for 12 g iLOK™	
PF-113-SD-025	Top frit for 25 g iLOK™	
PF-123-SD-040	Top frit for 40 g iLOK™	
Top Frit (20 - 25 µm) for iLOK™ Series		
PF-124-SD-060	Top frit for 60 g iLOK™	20
PF-124-SD-080	Top frit for 80 g iLOK™	
PF-134-SD-100	Top frit for 100 g iLOK™	
PF-124-SD-120	Top frit for 120 g iLOK™	
PF-134-SD-220	Top frit for 220 g iLOK™	
PF-134-SD-330	Top frit for 330 g iLOK™	
PF-034-SD-0800B-7000B	Top frit for 800 g to 7 kg iLOK™ large-size	1
PF-134-S-10KG	Top frit for 10 kg iLOK™ large-size	
Standard Silicone O-Ring for iLOK™ Series*		
OS-SD-004	O-ring for 4 g iLOK™	50
OS-SD-012	O-ring for 12 g iLOK™	
OS-SD-025	O-ring for 25 g iLOK™	
OS-SD-040	O-ring for 40 g iLOK™	
OS-SD-060	O-ring for 60 g iLOK™	20
OS-SD-080	O-ring for 80 g iLOK™	
OS-SD-100	O-ring for 100 g iLOK™	
OS-SD-120	O-ring for 120 g iLOK™	
OS-SD-220	O-ring for 220 g iLOK™	
OS-SD-330	O-ring for 330 g iLOK™	
Frit Insertion Rod Tool		
TO-PF-IR-001	Frit insertion rod tool for 4 g iLOK™	1
TO-PF-IR-002	Frit insertion rod tool for 12 g, 25 g & 40 g iLOK™	
TO-PF-IR-003	Frit insertion rod tool for 80 g & 120 g iLOK™	
TO-PF-IR-004	Frit insertion rod tool for 220 g & 330 g iLOK™	
Cap Screwing Tool		
TO-SD-0104	Cap screwing tool for 60 g & 330 g iLOK™	1
TQ-001	Bench clamp for iLOK™ cartridge screwing cap	
TO-SD-0103	Cap screwing tool for for 60 g & 330 iLOK™ and bench clamp	

*Convenient Installation of O-Ring

Place the appropriate O-ring evenly inside the lid of the iLOK™ column. Then, invert and securely tighten the iLOK™ column. Installation is simple and can be completed easily after unscrewing.

Note: O-rings may deform after prolonged exposure to organic solvents but usually recover within 40 minutes. To extend their service life, unscrew the iLOK™ column, rinse with ethanol, then place in a well ventilated place or blow-dry after each experiment.

Item Number	Description	Qty / Box	
Bottom Frit (16 - 20 μm) for iLOK™ Series			
PF-213-SD-004	Bottom frit for 4 g iLOK™	50	
PF-213-SD-012	Bottom frit for 12 g iLOK™		
PF-213-SD-025	Bottom frit for 25 g iLOK™		
PF-223-SD-040	Bottom frit for 40 g iLOK™		
Bottom Frit (20 - 25 μm) for iLOK™ Series			
PF-224-SD-060	Bottom frit for 60 g iLOK™	50	
PF-224-SD-080	Bottom frit for 80 g iLOK™		
PF-234-SD-100	Bottom frit for 100 g iLOK™		
PF-224-SD-120	Bottom frit for 120 g iLOK™		
PF-234-SD-220	Bottom frit for 220 g iLOK™		
PF-234-SD-330	Bottom frit for 330 g iLOK™	1	
PF-034-SD-0800B-7000B	Bottom frit for 800 g to 7 kg iLOK™ large-size		
PF-234-S-10KG	Bottom frit for 10 kg iLOK™ large-size		
Fluorocarbon (FKM) O-Ring for iLOK™ Series*			
OS-SD-004-F	FKM O-ring for 4 g iLOK™	50	
OS-SD-012-F	FKM O-ring for 12 g iLOK™		
OS-SD-025-F	FKM O-ring for 25 g iLOK™		
OS-SD-040-F	FKM O-ring for 40 g iLOK™		
OS-SD-060-F	FKM O-ring for 60 g iLOK™	20	
OS-SD-080-F	FKM O-ring for 80 g iLOK™		
OS-SD-100-F	FKM O-ring for 100 g iLOK™		
OS-SD-120-F	FKM O-ring for 120 g iLOK™		
OS-SD-220-F	FKM O-ring for 220 g iLOK™		
OS-SD-330-F	FKM O-ring for 330 g iLOK™	1	
Disposable Parts for iLOK™ III Large-Size Series			
ET-SD0800B-1	Disposable plastic column 800 g		
ET-SD1600B-1	Disposable plastic column 1,600 g		
ET-SD3000B-1	Disposable plastic column 3 kg		
ET-SD5000B-1	Disposable plastic column 5 kg		
ET-SD7000B-1	Disposable plastic column 7 kg		
PF-034-SD-0800B-7000B	Disposable frit for large-size 800 g to 7 kg iLOK™ III	1	
OS-SD-0800B-7000B-1	Disposable sealing ring for large-size 800 g to 7 kg iLOK™ III		
Reusable Parts for iLOK™ III Large-Size Series			
CNTK-SD-0800B-7000B-1	Reusable assembly for large-size iLOK™ III 800 g to 7 kg, including one stainless steel cap, retaining ring, & sealing ring, and four butterfly screw bolts	1	





Contact Us



Simplify your purification, maximize your efficiency!

Santai Science Inc.

How to Order Santai Science Products

At Santai Science, we take pride in providing our products directly to customers from our Montreal office. Our dedicated team, is here to support your needs every step of the way.

To ensure a smooth ordering process, please include the following details with your order:

- **Company information:** billing and shipping addresses.
- **Order details:** purchase order number or credit card information, item numbers, product descriptions, quantities, and unit of measure.
- **End-user information:** full name, email address, and phone number of the end user.



By Phone

You can place an order with our customer service team in French or English, Monday to Friday, between 8:30 AM and 5:30 PM Montreal time (GMT-5).

Phone: +1 514 505 1378

By Email

Orders can be emailed to the following address:

order@santaisci.com

Online Ordering

1. Visit our website at www.santaisci.com and explore our “Online Store” by clicking the tab in the top menu bar or the shopping cart icon on the right-hand side.
2. Browse our product catalog and select the items you wish to order, specifying the desired quantities. Once you’re ready, click on the shopping cart icon to proceed to checkout.
3. You have several options for checkout:
 - Use express checkout with “Shop Pay” or “Google Pay.”
 - Log in to your account, or create one if you’d like.
 - Proceed as a guest.
4. Fill out all the required fields in the form, providing your contact information, selecting your preferred shipping method, and entering your payment details based on the chosen method.
5. Once all the information has been entered, click the “Pay Now” button at the bottom of the page to complete your payment.



Why Choose Santai

At Santai Science, we are committed to empowering your success with our global reach, innovative technologies, and unwavering support. Here's why partnering with us is the right choice for your chromatography needs:

- **Global presence:** Santai Science seamlessly delivers world-class chromatography solutions to customers worldwide, ensuring quality and reliability no matter where you are. No matter where you are, our global presence ensures you receive the quality and reliability you deserve.
- **Innovative solutions for excellence:** elevate your scientific pursuits with our cutting-edge chromatography technologies. Designed with precision and innovation, our solutions empower you to achieve unparalleled results in your research and applications.
- **Unwavering customer support:** your success is our priority. At Santai Science, we go beyond boundaries to provide dedicated, personalized support. Wherever you are, you can count on us to be your trusted partner every step of the way.

Choose Santai Science - because your success drives our innovation.



SepaBean™ Family

machine U

(entry-level)



machine T

(best-seller)



machine

(standard version)



machine 2

(medium pressure)



machine L

(scale-up)



SepaFlash™ Columns

Standard Series



Large Size Series



HP, Bio & Bonded Series



iLOK™ Series

(empty & pre-packed)



iLOK™ - SL Series

(Solid-load cartridges)



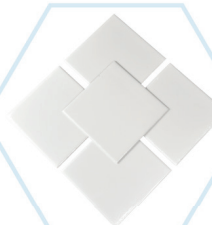
Ultra-Pure Bare Silica Gels



Ultra-Pure Bonded Silica Gels



TLC Plates



Other SepaFlash™ Products



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