

# Biotage® Selekt Family

Advanced Automated Flash Purification Systems



# This Is Biotage

Biotage is a Global Impact Tech Company committed to solving society's problems. We offer workflow solutions and products to customers in drug discovery and development, analytical testing and water and environmental testing.

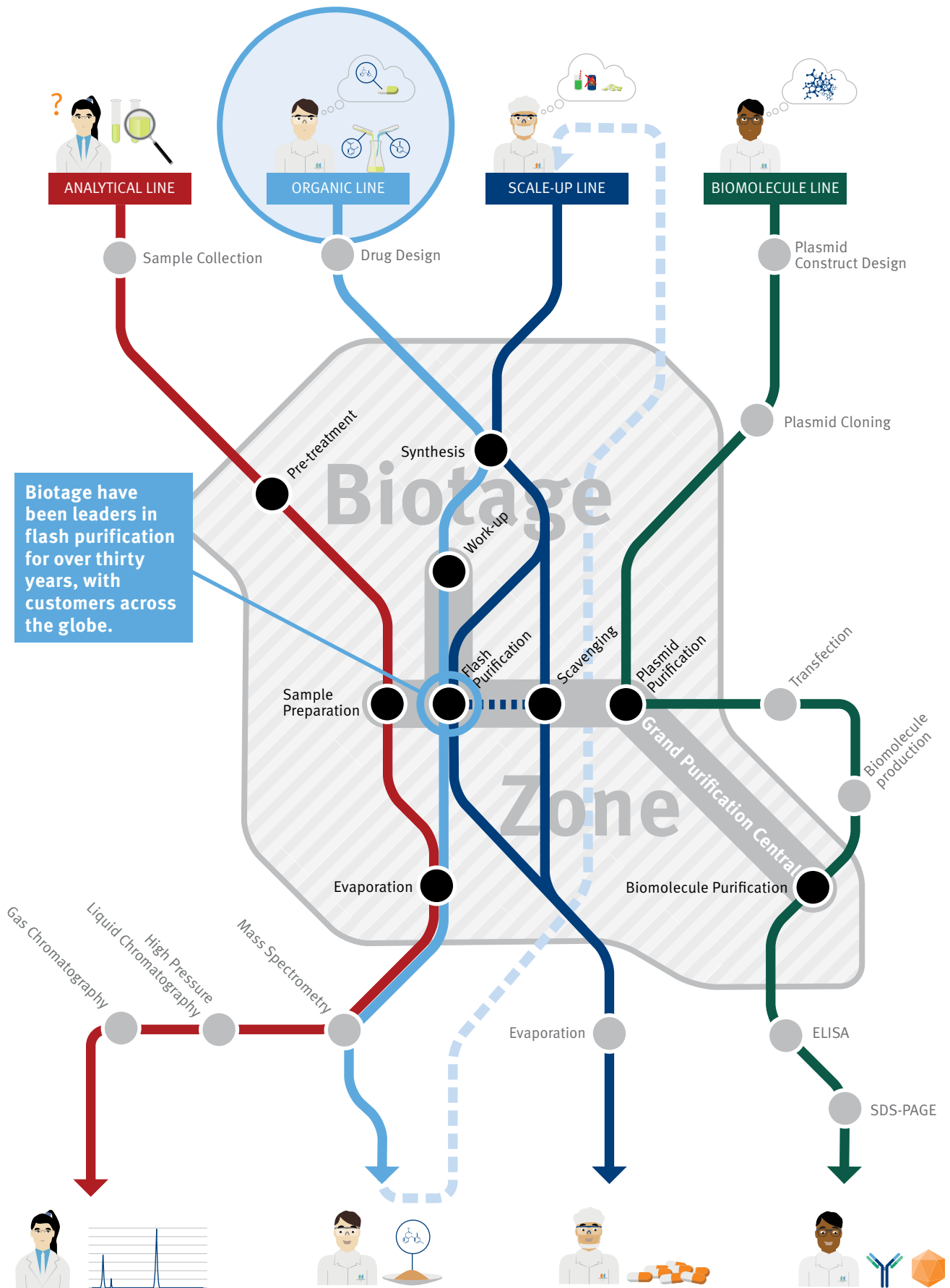
Biotage is contributing to sustainable science with the goal to make the world healthier, greener and cleaner – HumanKind Unlimited.

Our customers span a broad range of market segments including pharmaceutical, biotech, contract research and contract manufacturers as well as clinical, forensic and

academic laboratories in addition to organizations focused on food safety, clean water and environmental sustainability.

Biotage is headquartered in Uppsala in Sweden and employs over 400 people worldwide. Our products are sold in more than 70 countries, and Biotage's share (BIOT) is listed in the Large Cap segment on the NASDAQ Stockholm.'





Built by chemists for chemists, these systems are for scientists as they explore new avenues of research.

## The Biotage® Selekt Family

### Faster, Simpler, Greener – Better Flash Purification

The Selekt family of flash purification systems follows the design principles underpinning Biotage's approach to drug discovery – faster, simpler, greener and as a result, better.

#### Faster

High flow rates and smaller Biotage® Sfär high-capacity columns means Selekt delivers extremely fast purifications, so you get your samples when you need them. On the Selekt system, two column channels allow you to simply switch between normal and reverse phase separations on a single instrument, eliminating the need to flush solvent lines every time you change phase. The result? Faster purified sample delivery, so you can move on to the next stage in your workflow, without the trip to preparative HPLC.

#### Simpler

With a large touchscreen and an intuitive, colorful graphical user interface, programming the Selekt family of instruments could not be easier – no need to waste time looking through manuals to recall how to purify your sample. Sfär column loadings can be seen by scanning them with the QR code reader.

Racks are detected by Selekt for accurate identification. A powerful TLC-to-flash method editor creates methods based on your sample's behavior, ensuring that you get the best purification possible.

#### Greener

With Sfär high loading columns, column size can be minimized. Smaller Sfär columns means lower solvent consumption and less plastic disposal, greatly reducing the impact of purifying your compounds on the green footprint of the laboratory.

#### ...Better

The Selekt family of flash purification systems allow you to do the purifications you need quickly, simply and with reduced impact to the environment. Flash purification... better.



## For Purification, Selekt Biotage...

Biotage have been the providers of choice in flash purification for many large pharma, contract research and academic institutions, with thousands of instruments installed in laboratories across the globe. If you are looking to purify your compounds, why should you select Biotage?

### Selekt reliability and robustness

Biotage's instruments have a reputation for quality of design, robust performance and reliability that is second to none. For this reason, both Biotage® Selekt systems come with a five year warranty. Your work is important to you, so that is why it is important to us that your flash system performs exactly as you need, when you need it.

### Selekt speed and productivity

The Selekt family are the fastest flash purification systems at any given column size on the market. Using a combination of high flow rates, high-pressure stability and high loading columns, the Selekt family delivers the pure compounds you need with speed and efficiency, so you can get on with the real work. Science.

### Selekt simplicity

The touch screens of the Selekt family gives access to a powerful integrated software interface where all aspects of the purification can be controlled with just a few clicks. The software has been built with ease of use in mind to produce an intuitive interface – no need to learn complex procedures to get your work done.

### Selekt versatility

With up to two separate column channels allowing two different columns sizes or reverse/normal phase on the system, to four separate solvent lines, the Selekt is a versatile solution to all your flash purification requirements. No need to flush solvent lines to move from normal to reverse phase, simply switch to the second line for a no fuss transition in your chromatography. For laboratories that focus on single phase applications at smaller scale instead, Biotage® Selekt Enkel provides optimum flow rate and pressure performance.

### Selekt greener chemistry

The high loading capacity of Biotage® Sfär columns means that for any purification, a Biotage column is much smaller than those of other manufacturers. The result? Fast separations that save solvent and leave less plastic to dispose of, for a greener approach to your chemistry.

### Selekt Support

Biotage instrumentation is covered by our experienced service and support team. If you encounter any issues with your system or need advice on your work, Biotage is here to help.



# Biotage® Selekt Enkel

## Modular System for Small Scale Lab Applications

The Selekt Enkel system is a modular flash system for small-scale applications that can be configured to suit the needs of your laboratory. Selekt Enkel is optimized for applications of columns up to 100 g.

### Two solvent lines, one column line

Selekt Enkel is equipped with two separate solvent lines for gradient solvent systems, and one column line for columns up to 100 g. Changing solvent conditions means flushing the solvent and column lines so Selekt Enkel is best suited for laboratories that perform similar applications with robustness and reliability.

### Columns from 5 to 100 g

Selekt Enkel can routinely run lab scale Sfär columns from 5 g to 100 g, and the system is dedicated to smaller scale routine laboratory samples.

### UV detection

The Selekt Enkel comes with UV detection, suitable for the detection of the majority of common molecules.

### Modular design

The Selekt Enkel system is modular, so that additional features can be added to the system to meet user desires. For example, while QR code reading of column data comes as standard, RFID tag based intelligent rack handling is an additional add-on. This modularity means that the Selekt Enkel can be upgraded as desired to suit the needs of your laboratory.



## Biotage® Selekt

### Versatile Flash System for All Applications

Biotage® Selekt is a high performance flash instrument capable of taking on any application. With a maximum flow rate of 300 mL/min and a pressure capability of 30 bar, Selekt is the most versatile option for flash purification applications on columns up to 1.85 kg.

#### Four Solvent Lines, Two Column Lines

Selekt is equipped with four separate solvent lines allowing two different solvent systems (such as normal and reverse phase) to be set up simultaneously, and two columns lines that can each be dedicated to a solvent system. As a result, Selekt can automatically switch between applications with a flick of the touchscreen for ultimate application versatility.

#### Columns From 5 g to 1.85 kg

Selekt can routinely run lab scale Sfär columns from 5 to 340 g for laboratory scale reactions. With the addition of a safety valve, Selekt can run columns up to 1.85 kg for larger scale reactions, making Selekt the ideal versatile choice for the research laboratory.

#### UV/Vis detection

The Selekt can be fitted with a full UV/Vis detector, giving versatile detection options for molecules of different absorption maxima.

#### Simple by design

Packed with a wealth of ease-of-use features, you will never need to open the Selekt manual to get your work done. Features such as column QR code reader, automatic rack recognition, and network integration means that with Selekt, purifications will never be the bottleneck in your work.

# Features & Specifications

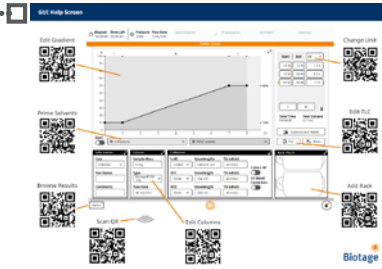


		Biotage® Selekt Enkel	Biotage® Selekt
<b>Performance</b>	Solvent Channels	<b>Two Solvent Channels</b>	<b>Four Solvent Channels</b>
	Column Channels	<b>One Column Channel</b>	<b>Two Column Channels</b>
	Flow Rate (mL/min.)	<b>1–150</b>	<b>1–300</b>
	Pressure Limit	<b>218 psi/15 bar</b>	<b>435 psi/30 bar</b>
	Column Size Range	<b>Up to 100 g</b>	<b>Up to 340 g</b> (larger columns may be used with the pressure valve)
	UV Detection	<b>UV Only</b>	<b>UV/UV-Vis</b>
	<b>Ease of Use</b>	Screen Interface	15" Touch
Column Identification		QR Code Scanner	QR Code Scanner
Rack Identification		Rack Handling, Optional RFID ✘	Rack Handling + RFID
Spektra license		Optional ✘	Optional ✘
Column Placement		Front and Side	Front and Side
<b>Accessories</b>	Network Access	Optional ✘	Included
	Extended Bed	Optional ✘	Optional
	Online help	Available	Available

✘ Installed by Service Engineer



Online help with instruction videos.



Large 15" touch screen with full system control.



QR code reader for column identification.



RFID enabled rack.

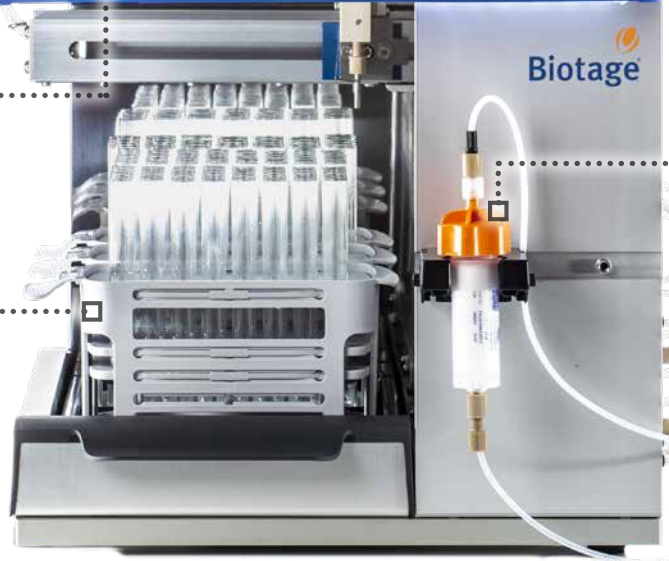


Two channels with columns mounted either on the side or front on Biotage Selekt.



Biotage Selekt Enkel has one channel and column attachment on the side only.

Compact size <14".



# Accessories

The Selekt family has a number of accessories that increase the functionality of the systems to suit your application needs

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## Spektra – Biotage® Selekt and Biotage® Selekt Enkel

The Spektra software upgrade is featured on page 10.



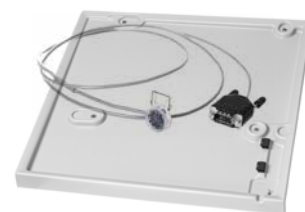
## Extended bed – Biotage® Selekt and Biotage® Selekt Enkel

The Biotage® Selekt and Selekt Enkel systems can be fitted with an extended collection bed, adding an additional three rack positions for larger numbers of collection fractions.



## Solvent Tray – Biotage® Selekt and Biotage® Selekt Enkel

An external tray beneath the Selekt or Selekt Enkel system allows any solvent spills to be contained and features a solvent leak sensor for additional safety.



## Secondary solvent container – Biotage® Selekt and Biotage® Selekt Enkel

Selekt and Selekt Enkel top panels may be removed and replaced with a secondary solvent container. This container has sufficient volume to collect any solvent spilt by damage to a solvent or waste reservoir, and may be connected to a solvent sensor to increase operational safety. It may also be used as a waste containment vessel with solvent sensing.



## Column Holders



## Column Inlet Tubing



## Large Column Holder



## Safety valve

The safety valve kit is required when running columns or combinations (e.g. column and dry load vessel) with a total CV larger than 0.8 L, e.g. 750 g up to 1.85 kg in size.



## Intelligent RRID rack handling – Biotage® Selekt Enkel

Rack handling allows racks to be tagged and followed by the Selekt Enkel system, so that specific racks can be associated with particular purification runs, making tracking of samples simple. This feature is standard on Selekt.



## Networking – Biotage® Selekt Enkel

Saving data to an external network is possible with this add on. This feature is standard on Selekt.



## Racks

Complete set of racks available for 13 x 100 mm tubes to 480 mL flasks.



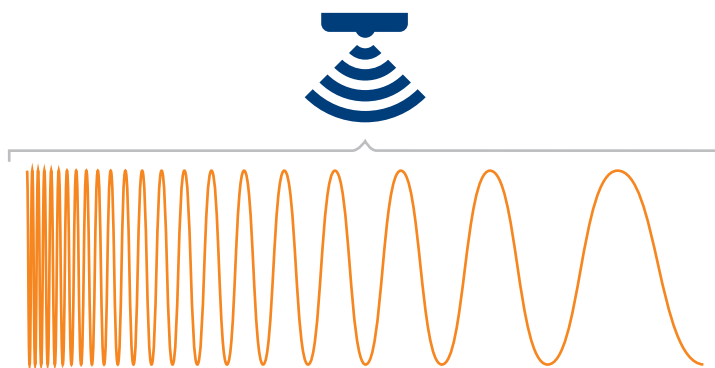


## Biotage® Spektra – Intelligent Detection

Spektra software is an add-on to the Selekt family systems that provides functionality to greatly enhance detection and fractionation capabilities. If your compounds have a poor UV chromophore or the solvent masks their absorption, Spektra is the answer.

### Every wavelength at once

The lambda-all feature of Spektra software allows all wavelengths to be scanned at once, giving a full spectral analysis of peaks as they elute from the flash column. The lambda max for a compound isn't needed – if it absorbs within the specified wavelength range, Spektra will detect it. On the instrument lambda-all and two individual wavelengths can be displayed at once. Spektra also allows post-processing of the run for further analysis.

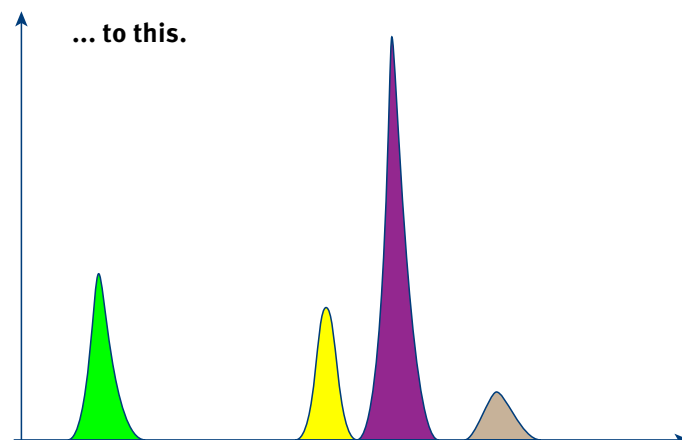
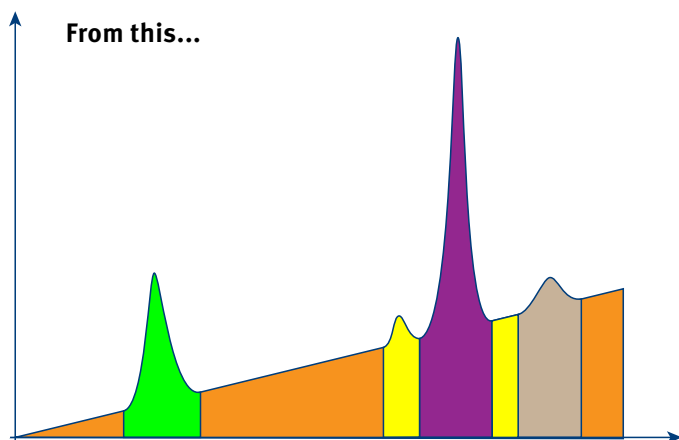


## True baseline correction

Spektra performs real baseline corrections, so that you know the peaks you are seeing in your data, and the fractions you are collecting, are real. This is performed automatically by the system running a rapid gradient at the start of the run and determining the UV absorbance across the gradient at each point. This correction is then applied real-time when you perform the actual purification.

No smoothing algorithms. Baseline correction based on just real data.

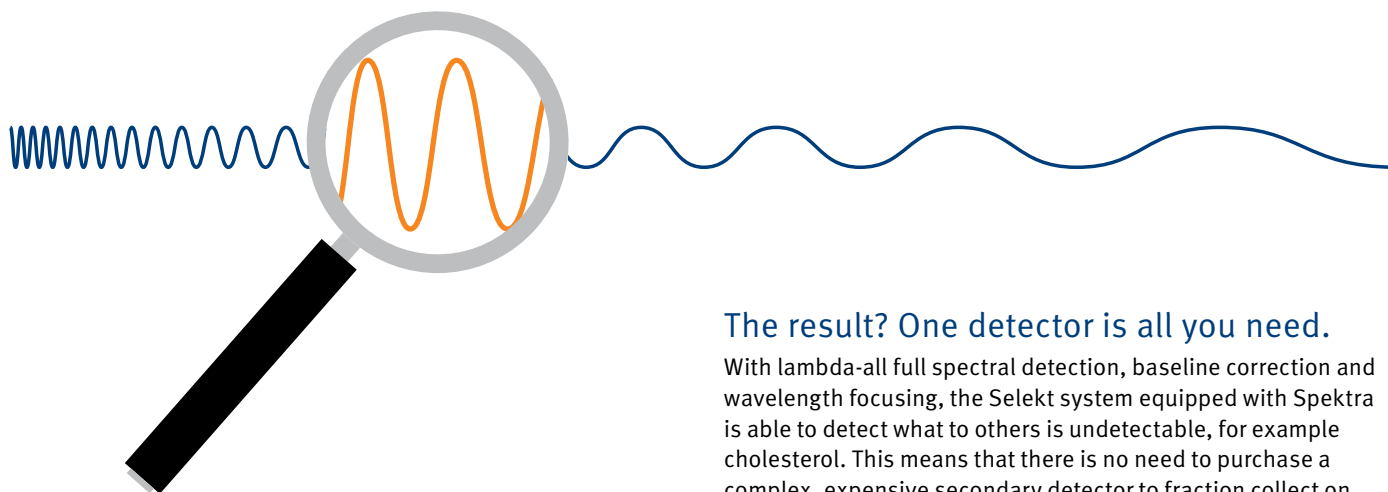
Flattening the baseline in this way allows even weakly absorbing peaks that would otherwise be hard to distinguish over the baseline to be seen. This feature also allows for the use of less commonly used solvents such as acetone or methyl benzene (toluene).



## Wavelength focusing

Since organic molecules absorb UV light over bands covering several wavelengths, selecting one or two specific wavelengths limits the UV response compared to looking at a wavelength range. Even using a range of wavelengths may not improve detection unless the range is narrow. This is especially true for those organic compounds not blessed with aromaticity, conjugation, or other UV absorbing functionality.

In lambda-all detection, the response from every wavelength is summed and divided by the number of wavelengths over the specified wavelength range. As a result, if the wavelength range is focused to a narrow range, the response increases proportionally. This can be used to maximize peaks from even very weakly absorbing compounds and detect a response that others miss by utilizing a narrow absorption range.



## The result? One detector is all you need.

With lambda-all full spectral detection, baseline correction and wavelength focusing, the Selekt system equipped with Spektra is able to detect what to others is undetectable, for example cholesterol. This means that there is no need to purchase a complex, expensive secondary detector to fraction collect on species with poor UV absorbance – Spektra does the job for you.

## Selekt Systems and Sfär Columns – Perfect Partners

The Biotage Selekt family of flash purification systems are complemented by the high-performance Sfär column range – the perfect partners for advanced sample purification.

- » Available in normal, reverse and bio phases
- » Sizes range from 5 g to 340 g for purification of mg to multi-gram samples
- » Highest loading of any flash columns, for reduced solvent use, run time and cost
- » Smaller columns means greener purifications

For more information, view our **Sfär Column brochure**



## Selekt Systems and Sfär columns – Simplify Sample Scale-up

The Selekt systems are designed to facilitate simple scale-up to Biotage's large-scale flash purification systems, for sample sizes up to multi-kilogram.

- » Use of the same media in small and large scale columns for reproducible scale-up
- » Simple procedures to move from small to large scale
- » Support from our dedicated scale-up team

For more information of Biotage's large scale flash products, visit **biotage.com**



**Biotage® Selekt**

# Ordering Information

Part Number	Description
<b>Instruments</b>	
<b>SEL-2SV</b>	Biotage® Selekt, Two Channel, Single Collection Bed, UV Detector
<b>SEL-2SW</b>	Biotage® Selekt, Two Channel, Single Collection Bed, UV-VIS Detector
<b>SEL-2EV</b>	Biotage® Selekt, Two Channel, Extended Collection Bed, UV Detector
<b>SEL-2EW</b>	Biotage® Selekt, Two Channel, Extended Collection Bed, UV-VIS Detector
<b>SEL-ESV</b>	Biotage® Selekt Enkel single channel, single collection bed, UV detector
<b>Software</b>	
<b>SEL-SPK</b>	Biotage® Spektra Software Package
<b>Accessories</b>	
<b>417538SP</b>	Cartridge holder 5 g/10 g with O-ring
<b>417539SP</b>	Cartridge holder 25 g with O-ring
<b>415343SP</b>	Column Holder Sfär 50/100 g
<b>415337SP</b>	Column Holder Sfär 200/350 g, 1 pcs.
<b>416301SP</b>	13 x 100 mm RFID Rack (incl. 3 pcs.)
<b>416302SP</b>	16 x 100 mm RFID Rack (incl. 3 pcs.)
<b>416303SP</b>	16 x 150 mm RFID Rack (incl. 3 pcs.)
<b>416305SP</b>	18 x 150 mm RFID Rack (incl. 3 pcs.)
<b>416306SP</b>	25 x 150 mm RFID Rack (incl. 3 pcs.)
<b>416307SP</b>	120 mL flask RFID Rack (incl. 3 pcs.)
<b>416230SP</b>	240 mL flask RFID Rack (holds 10 flasks)
<b>416225SP</b>	480 mL flask RFID Rack (holds 8 flasks)
<b>416321SP</b>	Biotage® Selekt Secondary Solvent Containment
<b>416410SP</b>	Biotage® Selekt Instrument Tray with Solvent Sensor
<b>417501SP</b>	Biotage® Selekt Enkel network upgrade kit
<b>417502SP</b>	Biotage® Selekt Enkel extended bed upgrade kit
<b>417504SP</b>	Biotage® Selekt Enkel RFID upgrade kit
<b>417115SP</b>	Biotage® Safety Valve Kit
<b>412358</b>	XL Fitting, Female Luer, Assembly – Isolera™ LS
<b>412422</b>	750 g / 1500 g Holder Assembly – Isolera™ LS
<b>412537</b>	Male Luer outlet fitting for SNAP 750 g and 1500 g cartridges

# Your Complete Partner for Effective Chemistry

Biotage is a worldwide supplier of instruments and accessories designed to facilitate the work of laboratory and process chemists. With our deep knowledge of the industry, academic contacts and in-house R&D teams, we can deliver the best solutions to your challenges. We take great pride in our flexibility and ability to meet our customer's individual needs. With strong foundations in both analytical, organic and process chemistry, we can offer the widest range of solutions available on the market.

## EUROPE

Main Office: +46 18 565900  
Fax: +46 18 591922  
Order Tel: +46 18 565710  
Order Fax: +46 18 565705  
order@biotage.com  
Support Tel: +46 18 56 59 11  
Support Fax: + 46 18 56 57 11  
eu-1-pointsupport@biotage.com

## NORTH & LATIN AMERICA

Main Office: +1 704 654 4900  
Toll Free: +1 800 446 4752  
Fax: +1 704 654 4917  
Order Tel: +1 800 446 4752  
Order Fax: +1 704 654 4917  
ordermailbox@biotage.com  
Support Tel: +1 800 446 4752  
us-1-pointsupport@biotage.com

## JAPAN

Tel: +81 3 5627 3123  
Fax: +81 3 5627 3121  
jp\_order@biotage.com  
jp-1-pointsupport@biotage.com

## CHINA

Tel: +86 21 68162810  
Fax: +86 21 68162829  
cn\_order@biotage.com  
cn-1-pointsupport@biotage.com

## KOREA

Tel: +82 31 706 8500  
Fax: +82 31 706 8510  
korea\_info@biotage.com  
kr-1-pointsupport@biotage.com

## INDIA

Tel: +91 11 45653772  
india@biotage.com

Distributors in other regions  
are listed on [www.biotage.com](http://www.biotage.com)

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