Flash Purification Technical Note

# Performance at a value price

# **Biotage ZIP**<sup>™</sup>

Flash Chromatography Cartridges



# **Isolera**<sup>™</sup> Prime

Flash Purification System



The new **Biotage ZIP** flash cartridge line is an evolution in Biotage's long history of manufacturing flash purification cartridges. Biotage ZIP cartridges deliver industry-standard performance at a value price that meet the difficult challenges of day to day purification. Plug and play Biotage ZIP cartridges are the perfect compliment to all Isolera instruments, compatible with systems from other manufacturers and available in a wide range of sizes. As the first company to pre-pack flash cartridges for chemists, Biotage is the industry leader in flash purification innovation.

**Isolera Prime** is the new standard in value-priced flash purification systems delivering a full range of features and cost-saving benefits. This flexible system is upgradeable and grows with the needs of laboratories and universities where value is especially important. Isolera Prime is compatible with Biotage flash cartridges, including the new value-priced Biotage ZIP.

Isolera Prime is the newest addition to the acclaimed Isolera automated flash system family, specifically designed for chemists needing an automated purification platform to increase productivity delivering high value and just the right features.



# **Biotage ZIP**<sup>™</sup> Flash Chromatography Cartridges



Available in sizes from 5 g to 120 g and scalable up to Flash 400



Industry-standard Luer fittings are compatible with all flash systems



Laser-welded fittings provide leak-free operation

#### **Features and Advantages**

- Value priced to save money
- · Consistent performance for reliable results
- Laser-welded inlet fitting provides leak-free operation and high pressure tolerance
- · Luer tip outlet compatible with all flash systems
- Automated manufacturing process provides better cartridge reliability, reproducibility and performance over lesser quality competitive products

#### **Specifications**

Materials Tubes: inert polypropylene

Frits: polyethylene 40-63 µm KP-SIL

Pressure limit Stable to 150 psi (10 bar)

80 g max pressure 120 psi (8 bar)

**Quantity** Packages of 20

**Compatibility** Universal Luer connections, compatible with

most flash systems

**Sizes** 5, 10, 30, 45, 80 and 120 g cartridges

#### High performance at a value price

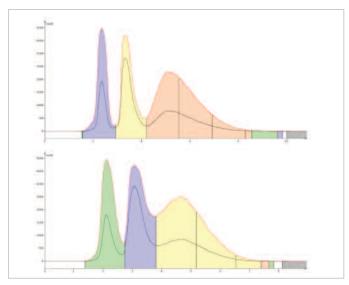
Biotage ZIP cartridges are engineered to meet the needs of chemists requiring high performance and consistency from a purification cartridge at a value price to reduce purification costs. Biotage ZIP cartridges are laser-welded to ensure consistent, leak-free operation even at elevated pressures. Compared to competitive cartridges, Biotage ZIP cartridges will not leak even when operating at maximum pressure.

### Plug and play design

Constructed with industry-standard Luer lock inlet and Luer tip outlet ports, Biotage ZIP cartridges are truly universal in their use with flash systems from around the world. No adapters are needed, so installation is quick and easy.

#### Wide range of sizes and scalable

Biotage ZIP cartridges are packed with Biotage® KP-SIL brand silica which is used in all Biotage silica flash cartridges. Available in sizes from 5-120 g, Biotage ZIP cartridge purifications can be scaled up to larger Biotage cartridges including Biotage SNAP 340, 750 and 1500 g, Flash 75 and 1500, and even Flash 400 without method modification.



**Figure 1.** A 30 g Biotage ZIP cartridge (top) and a competitive 30 g flash cartridge with spherical silica (bottom) are used to isocratically separate a 3-component mix. The Biotage ZIP cartridge provides more compound resolution and sharper peaks for the same sample load.

# **Isolera Prime**<sup>™</sup> Flash Purification System



Includes a full range of features such as cost-saving Gradient Optimization



TLC-to-gradient feature delivers optimal purification



Large, easy-to-read and use touch screen

#### **Features and Advantages**

- Value based system with a full range of features
- Solvent-saving Gradient Optimization can reduce solvent use up to 60% lowering system
- Upgradeable and grows to your needs
- 145 psi (10 bar) pressure capability enables both normalphase and reversed-phase purification
- Patented TLC-to-Gradient feature eliminates method development guessing and re-runs
- Up to 100 mL/min flow rate to speed purification
- Utilizes new Biotage ZIP™ cartridges and high performance Biotage® SNAP cartridges
- Small footprint minimizes bench and hood space
- Large 10.4 inch (26.4 cm) touchscreen with large buttons simplifies user interaction
- Easy to use software enables fast method development
- Two UV detector options to address different application needs
- Holds four solvents providing binary gradient flexibility
- · 4.8-L fraction capacity minimizes rack changes
- ELSD accessory enables detection and collection of UVtransparent molecules

#### **Value**

The Isolera Prime delivers more than just the basics. Also included are a patented TLC-to-Gradient feature that eliminates method development guesswork and a solvent-saving gradient optimization function that reduces solvent use by up to 60%. Cost savings are further realized with use of the new value-priced, high performing Biotage ZIP cartridges available in wide range of sizes.

#### **Performance**

Isolera Prime performs at flow rates up to 100 mL/min with a pressure range up to 145 psi (10 bars). The built-in detector (fixed 254 nm or variable wavelengths 200–400 nm) provides excellent detection for aromatic and conjugated organic compounds and can trigger fractionation using threshold, slope, or volume parameters. For UV-transparent compounds, an ELSD is available and easily integrated.

#### **Flexibility**

The Isolera Prime can be upgraded and customized to any laboratory's requirements with the addition of a range of accessories, including external dry-loading vessels, leak detector, fraction racks and cartridge holders. Biotage also offers the widest range of flash cartridges for higher performance and scalability including the new value priced Biotage ZIP, industry-standard SNAP, FLASH+ and ISOLUTE® products available in sizes from 5–750 q.

### Specifications

Solvent delivery Constant volume electric HPFC pump

 Flow rate
 5-100 mL/min.

 Pressure limit
 145 psi (10 bar)

UV detection Choice of variable dual-wavelength

(200-400 nm) or fixed (254 nm) detector

Flow cell path length 0.3 mm

**UV collection modes** Single wavelength, Dual wavelength

(variable UV)

Fractionation modes Volume, threshold, threshold with volume,

low slope, medium slope, custom slope

Collection vessels Test tubes (13, 16, 18 and 25 mm)

Bottles (120, 240 and 480 mL)

**Power** 100–240 VAC, 50/60 Hz, 4.0 A

**System control and** On-board computer with 10.4" diagonal touch screen interface

**Dimensions** 355 mm x 596 mm x 497 mm (W x H x D) (14 in. x 23.5 in. x 9.6 in.)

Weight 30 kg (66 lbs.)

Certifications CE, cTÜVus

## **Ordering Information**

#### Isolera Prime™

Description	Part Number
Isolera Prime with fixed wavelength detector and 4.8 L fraction capacity	ISO-PSF
Isolera Prime with variable wavelength detector and 4.8 L fraction capacity	ISO-PSV
Accessories	
Evaporative Light-Scattering Detector	ISO-ELSD-1080
13 x 100 mm test tube rack, 4/pk	411789
16 x 100 mm test tube rack, 4/pk	411790
16 x 150 mm test tube rack, 4/pk	411791
18 x 150 mm test tube rack, 4/pk	411792
25 x 150 mm test tube rack, 4/pk	411793
120 mL bottle rack, 4/pk	411794
240 mL bottle rack, 1/pk	411934
480 mL bottle rack, 1/pk	411929
Biotage ZIP™ 5 g/10 g cartridge holder	413092
Biotage ZIP 30 g cartridge holder	413302
Biotage ZIP 45 g cartridge holder	413303
Biotage ZIP 80 g cartridge holder	413304
Biotage ZIP 120 g cartridge holder	413305
Biotage SNAP 10 g cartridge holder	411922
Biotage SNAP 25 g cartridge holder	411776
Biotage SNAP 50 g/100 g cartridge holder	411923
Biotage SNAP 340 g cartridge holder	411924
Biotage SNAP 750 g/1500 g cartridge holder	412422
Leak detector, single fraction collection bed	412019

## **Biotage ZIP™ Cartridges**

Description	Part Number
Biotage ZIP cartridge, 5 g, 20/pk	440-0500-DZ-20
Biotage ZIP cartridge, 10 g, 20/pk	440-1000-EZ-20
Biotage ZIP cartridge, 30 g, 20/pk	440-3000-FZ-20
Biotage ZIP cartridge, 45 g, 20/pk	440-4500-SZ-20
Biotage ZIP cartridge, 80 g, 20/pk	440-8000-JZ-20
Biotage ZIP cartridge, 120 g, 20/pk	440-120G-UZ-20

## **Biotage® SNAP Cartridges**

Description	Part Number	Description	Part Number
KP-Sil		KP-C18-HS	
10 g, 20/case	FSK0-1107-0010	12 g, 2/case	FSL0-1118-0012
25 g, 20/case	FSK0-1107-0025	30 g, 2/case	FSL0-1118-0030
50 g, 20/case	FSK0-1107-0050	60 g, 2/case	FSL0-1118-0060
100 g, 20/case	FSK0-1107-0100	120 g, 2/case	FSL0-1118-0120
340 g, 6/case	FSK0-1107-0340	400 g, 1/case	FSL0-1118-0400
750 g, 2/case	FSK0-1107-0750	950 g, 1/case	FSL0-1118-0950
1500 g, 2/case	FSK0-1107-1500	1800 g, 1/case	FSL0-1118-1800
HP-Sil		KP-NH	
10 g, 20/case	FSHP-1207-0010	11 g, 10/case	FSN0-0909-0011
25 g, 20/case	FSHP-1207-0025	28 g, 10/case	FSN0-0909-0028
50 g, 20/case	FSHP-1207-0050	55 g, 10/case	FSN0-0909-0055
100 g, 20/case	FSHP-1207-0100	110 g, 10/case	FSN0-0909-0110
340 g, 6/case	FSHP-1207-0340	375 g, 1/case	FSN0-0909-0375
		900 g, 1/case	FSN0-0909-0900
		1800 g, 1/case	FSN0-0909-1800

#### **Related Products**



Isolera™ ELSD-1080

The Isolera ELSD is a universal detector designed for use with Isolera flash purification systems when purifying organic compounds that are undetectable by UV or visible light.

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