

Biotage® SNAP XL Family

Large Scale Columns for Flash Chromatography



Biotage SNAP XL universally compatible columns use industry standard luer lock connections and are designed to be used with many purification systems including Isolera™ LS and Biotage® Selekt. SNAP XL columns are capable of withstanding pressures up to 100 psi (7 bar). A refillable external dry load vessel with 500 g capacity is also available which is attached in series with the SNAP 750 g or SNAP 1500 g column.

Features

- » Polypropylene barrels and molded components
- » Polyethylene frits
- » Optimized column design
- » Laser welded ends (patent pending)
- » KP-SIL, 20, 25, 60 micron spherical normal phase, KP-C18-HS, 30 micron high capacity spherical C18, KP-NH, and ISOLUTE® NH media
- » 100 psi pressure capability
- » Routine operation 250–500 mL/min
- » Purify up to 150 g of sample
- » High productivity
- » Seamless scale-up
- » Performance tested
- » Low extractables

Family Range of Solutions

Biotage® SNAP XL columns address a growing need for optimized gram- to ~100+ g-scale purification, increasing efficiency and reducing costs. These columns extend the SNAP product ranges, providing chemists with more scalable tools for their synthesis and purification needs. There are 8 members in this family of column solutions, including the same media as Biotage® Sfär and more. SNAP XL columns will allow you to save hours, even days of purification run-time.

Seamless Scale-up

Packed to the same high-performance specifications Biotage® columns boast excellent resolution, superior sample loading and separating power. The complete family range allow development scale-up of a wide range of chromatographical situations: normal phase reverse phase and also more ‘difficult’ systems such as amine separation. See Figure 1 and Figure 3.

Low Extractables

Biotage® SNAP XL columns are constructed of rugged polyethylene and helps to ensure the highest purity fractions are collected. See Figure 2.

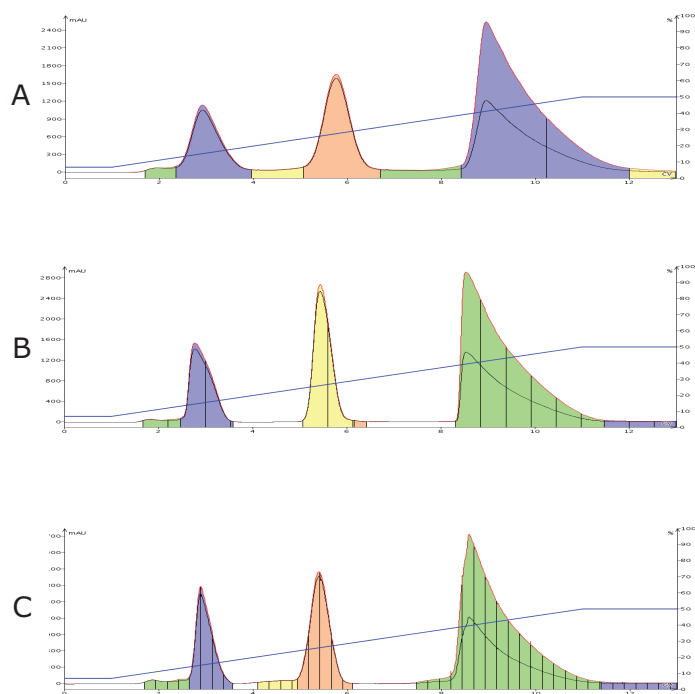
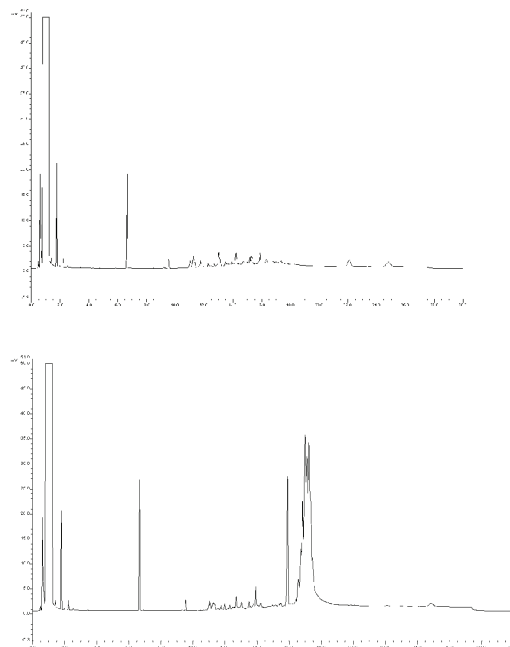


Figure 1. In this example, a 2.5 gram sample was first purified on a 50 g SNAP column (A) then scaled-up ~7x (17 g load) on a 340 g SNAP column (B) and 30x (75 g load) to a SNAP 1500 g column (C). The results show excellent separation retention and reproducibility. Runtime for the 1500 g column is less than 52 minutes operated at 500 mL/min.



Cleaner

Figure 2. SNAP columns reduce the amount of extractables and leachables generated by column construction materials. The gas chromatography analyses above show the results of DCM washes (4 liters) of a SNAP XL 1500 g KP-SIL column (left) and a competitive 1500 g column (right). Lower extractables ensure higher purity fractions.

Reverse Phase C18

Biotage® SNAP XL columns are manufactured with a highly efficient reverse phase chromatography media, which allows seamless scale-up from smaller Biotage lab scale columns. Biotage has demonstrated successful scale-up from 12 g through 1850 g SNAP XL column (Figure 3). It is reasonably common practice to re-use reverse phase columns, and although Biotage does not recommend this for prolonged periods, we have demonstrated that Biotage C18 columns can easily be recycled 10 times without significant deterioration of resolution (Figure 4). This greatly reduces running costs and significantly increased efficiency.

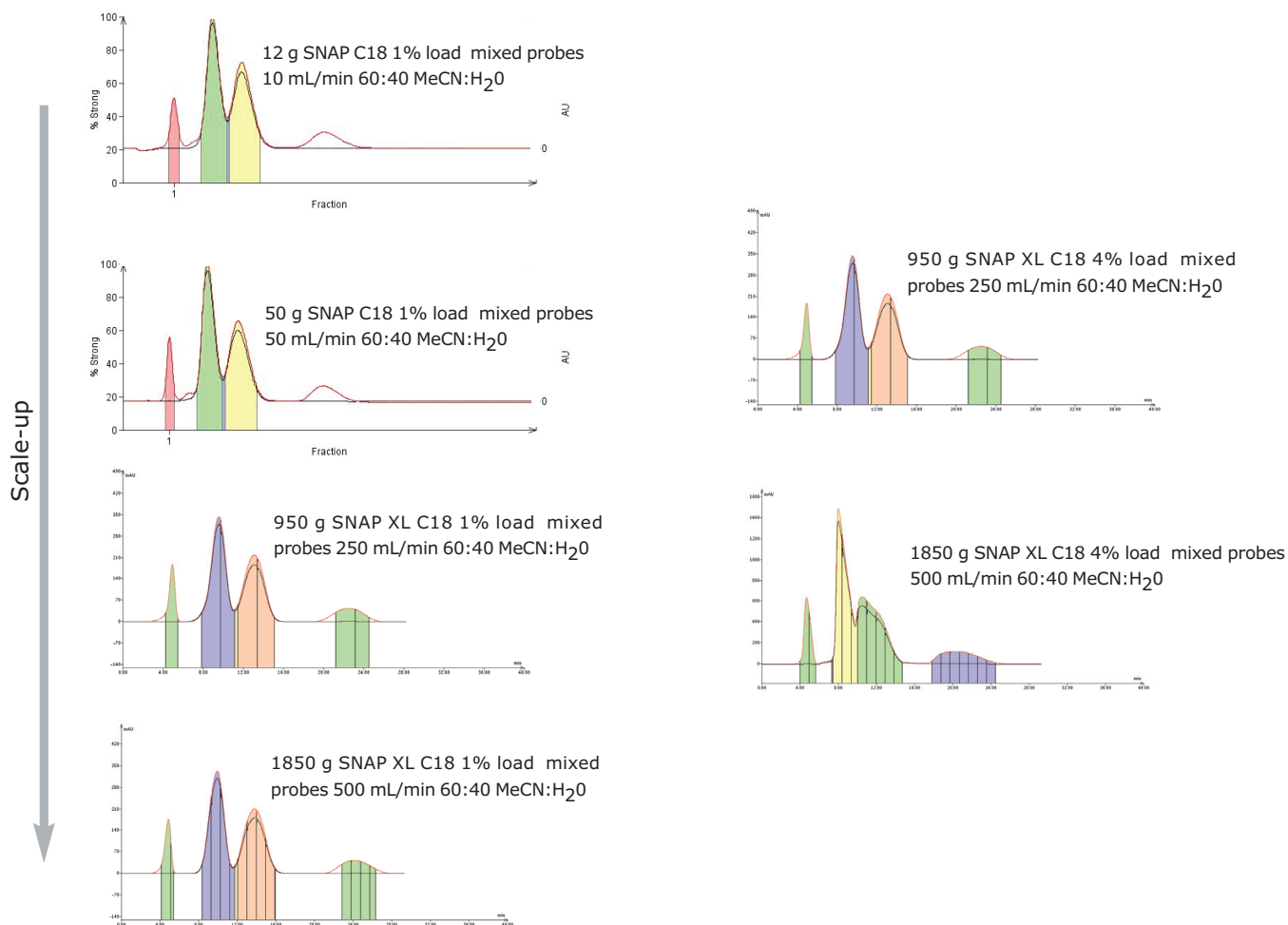


Figure 3.

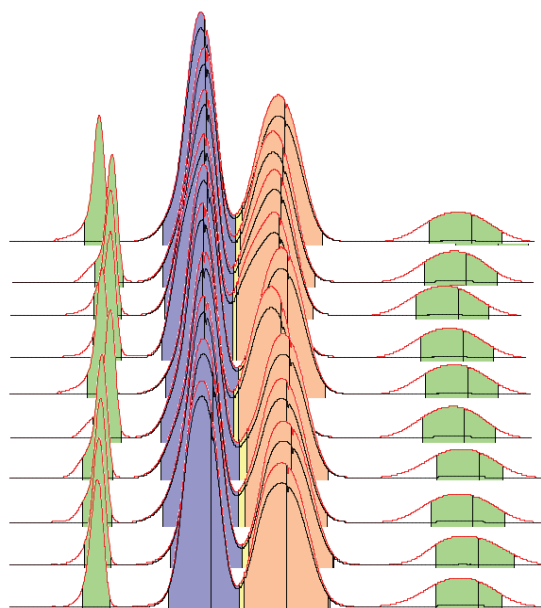


Figure 4.

C18 Repeatability SNAP XL 950 g 1% load-g 4 component mix n=10.

Conditions:

Evaluation work on SNAP XL 950 g and 1850 g formats using:
 Mixed probe test mix Benzyl alcohol, ethyl benzoate, methyl benzoate,
 o-xylene 75 mg/mL in Acetonitrile 100 mL 1% load on 750 g, 300 mg/mL
 100 mL 4% load on 950 g 75 mg/mL in Acetonitrile 200 mL 1% load on
 750 g, 300 mg/mL 200 mL 4% load on 950 g.

Mobile Phase Acetonitrile:
 Water 60:40 v/v. 250 mL/min 950 g, 500 mL/min 1850 g
 Syringe loading

Scaled-up from 12 g to 950 g/1850 g

SNAP KP-NH 100 g 1% load/g
Organic Amine mix

1. Phenylbenzylamine,
2. Promethazine,
3. 4-Dimethylaminoantipyrine,
4. Nifedipine

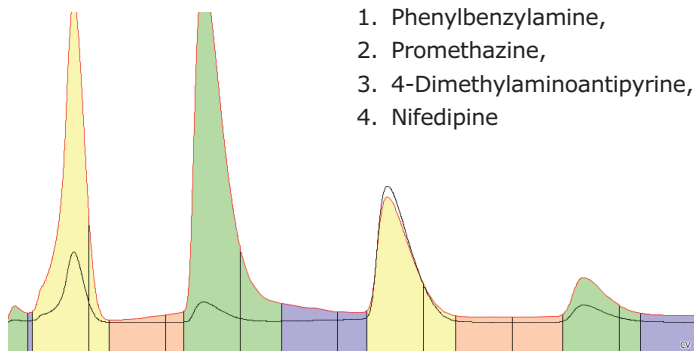
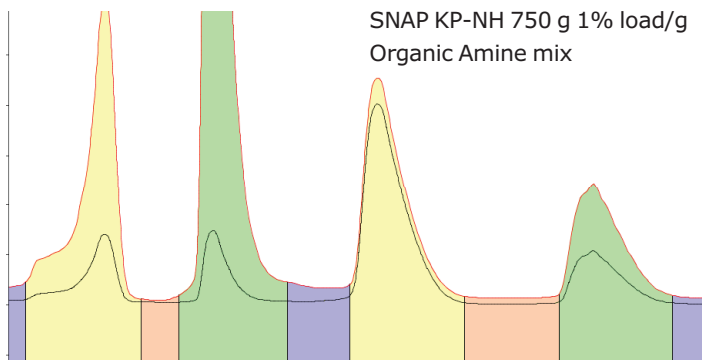


Figure 5.

Normal Phase – KP-NH

Biotage has previously demonstrated excellent scalability from 10 g KP-NH lab-scale through to the 100 g KP-NH through to the 100 g KP-NH. Figure 5 (left) shows seamless scale-up from 100 g columns through to the 750 g sizes. The column was in no danger of saturating / overloading, demonstrating its excellent resolving power (Figure 6).

SNAP KP-NH 750 g 1% load/g
Organic Amine mix



SNAP KP-NH 750 g 4% load/g
Organic Amine mix

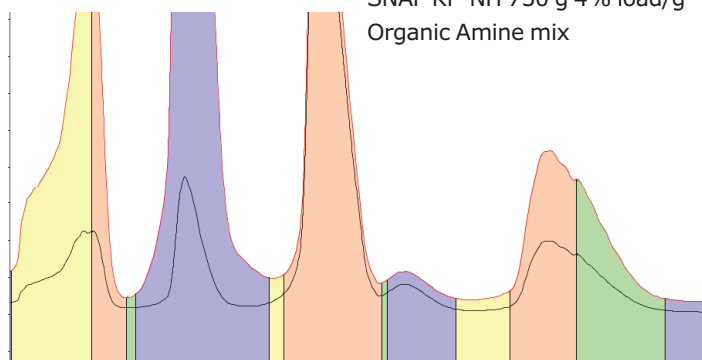


Figure 6.

Conditions:

Test Mix: Phenylbenzylamine, Promethazine, 4-Dimethylaminoantipyrine, Nifedipine Scale up from 100 g SNAP 1% load/g to 750 g SNAP XL 1% load/g. Increased loading from 1% load/g to 4% load/g. Solvents A) Heptane B) EtOAc.

Gradient: 7% B for 1 CV
7% – 60% B in 10 CV
60% B for 2 CV

Collect λ 254 nm
Monitor λ 280 nm
Flow Rate: 250 mL/min

Ordering Information

Part Number	Description	Quantity
FSUL-0445-0750	SNAP XL 750 g with Biotage® Sfär 60 micron silica	2/pk
FSUL-0445-1500	SNAP XL 1500 g with Biotage® Sfär 60 micron silica,	2/pk
FSUL-0443-0750	SNAP XL 750 g with Biotage® Sfär HC silica	1
FSUL-0443-1500	SNAP XL 1500 g with Biotage® Sfär HC silica	1
FSUL-0401-0950	Biotage® SNAP Ultra C18 950 g	1
FSUL-0401-1850	Biotage® SNAP Ultra C18 1850 g	1
FSN0-0909-0900	Biotage® SNAP KP-NH 900 g	1
FSN0-0909-1800	Biotage® SNAP KP-NH 1800 g	1
FSN0-0454-0900	Biotage® SNAP ISOLUTE® NH2, 900 g	1/cs
FSN0-0454-1800	Biotage® SNAP ISOLUTE® NH2, 1800 g	1/cs
DLV-500	Dry load vessel kit with holder, one empty column and frit	1
DLV-505	Replacement dry load vessels and frits	4
412358	Female Luer inlet fitting for SNAP 750 g and 1500 g columns	1
412537	Male Luer outlet fitting for SNAP 750 g and 1500 g columns	1
412422	SNAP 750 g and 1500 g column holder for Biotage® Selekt and Isolera™ systems	1



Specifications

	Column Size	Diameter (mm)	Bed Length (mm)	Silica Weight (g)	Typical Flow (mL/min.)	Column Volume (mL)
KP-Sil	750 g	82	291	750	100–300	990
	1500 g	107	328	1500	300–500	1980
KP-NH	750 g	82	291	900	100–300	990
	1500 g	107	328	1800	300–500	1980
KP-C18-HS	750 g	82	291	950	100–300	990
	1500 g	107	328	1850	300–500	1980

EUROPE

Main Office: +46 18 565900
Toll Free: +800 18 565710
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: +1 704 654 4900
Order Fax: +1 434 296 8217
ordermailbox@biotage.com
Support Tel: +1 800 446 4752
Outside US: +1 704 654 4900
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

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