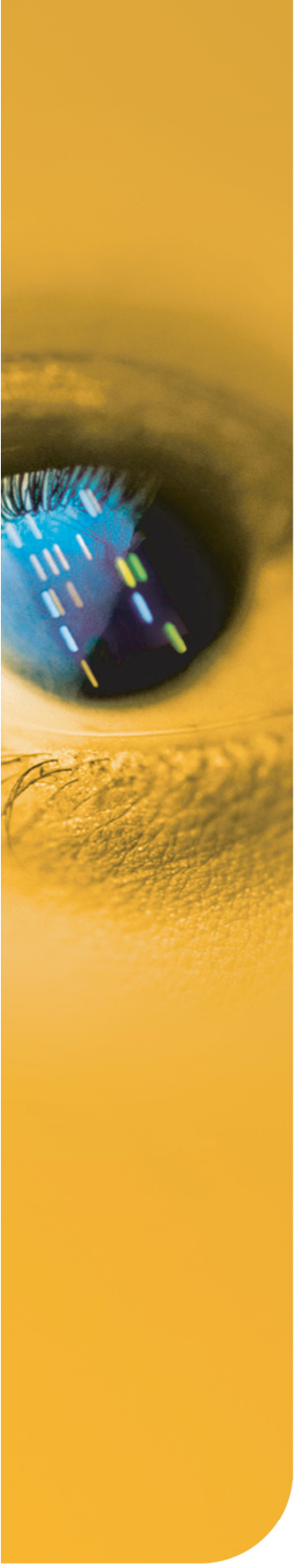
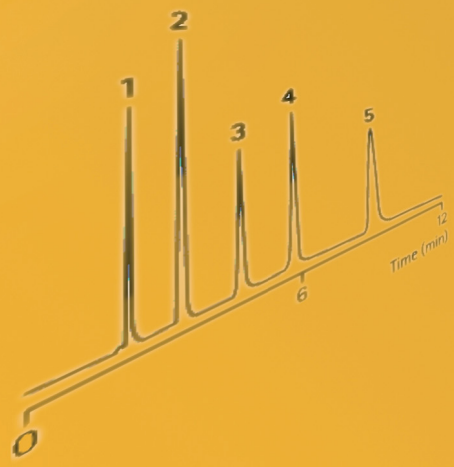


Flash Chromatography

New Generation of Ready-to-Connect Cartridges

Using Merck Silica



Designed to be...
Simply Efficient !

Ako nás možno kontaktovať:

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Robotnícka 10
831 03 Bratislava
Tel. 0907 244526
Fax. 02 20715811
azetchrom@hplc.sk
www.azetchrom.sk

MERCK

Discover and enjoy Fast Flash purifications offered by EasyVarioFlash® cartridges !

EasyVarioFlash® cartridges offer the latest improvements in Flash cartridges design.

EasyVarioFlash® is a Trade Mark of Götec-Labortechnik GmbH

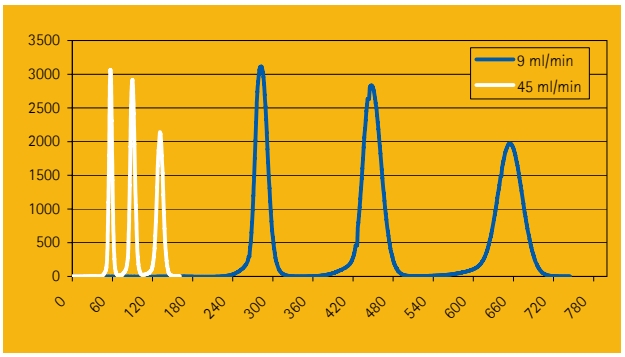
Based on the "Ready-to-Connect" concept, that avoids the use of additional pistons, we also integrated the advantages offered by our reknowned "Open-Top" range, as requested by our customers.

- Up to 10 bar pressure resistance !!
- Ready-to-Connect with Luer or Luer-Lock fittings
- Unique packing technology offers exceptional packing quality
- High packing density : quicker elution and lower fraction volume
- Cap can be unscrewed and removed !
- Direct deposit of viscous or precipitated samples on the frit
- Direct dry loading with specific cartridges
- Available empty for high-pressure pre-column applications
- Transparency helps to supervise conditioning and separation

Performance and resolution, in Standard or Fast Flash mode !

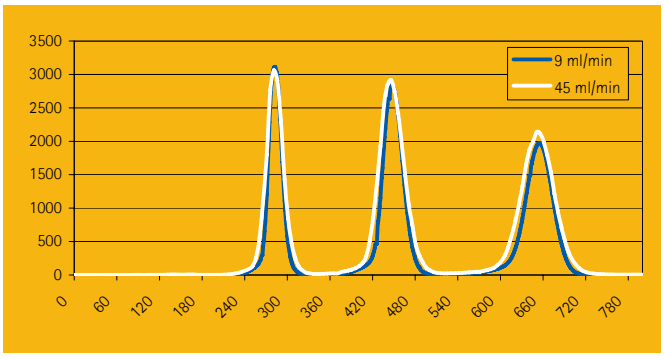
High pressure resistance (10 bar) and specific column technology enable to work at higher than usual flowrates.

Instead of using half the nominal flowrate as recommended by our competitors (due to column's technical limitations), EasyVarioFlash® can be run up to **2-3x** the nominal flowrate, even with our high performance **Si60 15-40 µm** silica !



EVF D17 15g Si60 15-40 µm
Real time chromatogram

Fast Flash runtime = 2,5 minutes !!!
Usual recommended flowrate = 12 minutes



EVF D17 15g Si60 15-40 µm
Chromatogram adapted to compare resolution

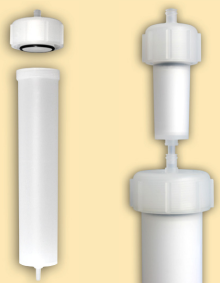
Nearly no resolution difference between Fast Flash and standard separations !!!

Specific features, for exigent users !

Cartridge outlet is available with Luer or Luer-Lock

Cap can be unscrewed for direct liquid deposit on the frit

Empty of partially filled cartridges can be used for dry loading



Normal phase Si60 Silica

- 12 sizes : 5g to 150g
- 4 diameters : D17, D24, D31, D44
- Pressure resistance: 10 bar (D17, D24, D31) - 7 bar (D44)
- Available with Luer or Luer-Lock outlet : it's your choice !
- Optimized column length for improved performance

Cartridge size	Bed height	Average loading	Nominal Flowrate	Fast Flash Flowrate
D17 5g	40 mm	150 mg	18 ml/min	18-36 ml/min
D17 10g	80 mm	300 mg	18 ml/min	18-36 ml/min
D17 15g	120 mm	450 mg	18 ml/min	18-36 ml/min
D24 20g	80 mm	600 mg	36 ml/min	36-72 ml/min
D24 30g	120 mm	900 mg	36 ml/min	36-72 ml/min
D31 40g	96 mm	1,2 g	60 ml/min	60-120 ml/min
D31 50g	120 mm	1,5 g	60 ml/min	60-120 ml/min
D31 70g	156 mm	2,1 g	60 ml/min	60-120 ml/min
D44 80g	96 mm	2,4 g	120 ml/min	120-240 ml/min
D44 100g	120 mm	3,0 g	120 ml/min	120-240 ml/min
D44 130g	156 mm	3,9 g	120 ml/min	120-240 ml/min
D44 150g	180 mm	4,5 g	120 ml/min	120-240 ml/min

Si60 15-40 µm - Irregular silica

Weight	Description	Qty / pack	Reference Luer	Reference Luer-Lock
5 g	EVF D17 5g Si60 15-40µm	30	GX017 15111 5	GX017 15111 5 LK
10 g	EVF D17 10g Si60 15-40µm	30	GX017 15111 10	GX017 15111 10 LK
15 g	EVF D17 15g Si60 15-40µm	30	GX017 15111 15	GX017 15111 15 LK
20 g	EVF D24 20g Si60 15-40µm	30	GX024 15111 20	GX024 15111 20 LK
30 g	EVF D24 30g Si60 15-40µm	30	GX024 15111 30	GX024 15111 30 LK
40 g	EVF D31 40g Si60 15-40µm	20	GX031 15111 40	GX031 15111 40 LK
50 g	EVF D31 50g Si60 15-40µm	20	GX031 15111 50	GX031 15111 50 LK
70 g	EVF D31 70g Si60 15-40µm	20	GX031 15111 70	GX031 15111 70 LK
80 g	EVF D44 80g Si60 15-40µm	20	GX044 15111 80	GX044 15111 80 LK
100 g	EVF D44 100g Si60 15-40µm	10	GX044 15111 100	GX044 15111 100 LK
130 g	EVF D44 130g Si60 15-40µm	10	GX044 15111 130	GX044 15111 130 LK
150g	EVF D44 150g Si60 15-40µm	10	GX044 15111 150	GX044 15111 150 LK

Si60 40-63 µm - Irregular silica

Weight	Description	Qty / pack	Reference Luer	Reference Luer-Lock
5 g	EVF D17 5g Si60 40-63µm	30	GX017 09385 5	GX017 09385 5 LK
10 g	EVF D17 10g Si60 40-63µm	30	GX017 09385 10	GX017 09385 10 LK
15 g	EVF D17 15g Si60 40-63µm	30	GX017 09385 15	GX017 09385 15 LK
20 g	EVF D24 20g Si60 40-63µm	30	GX024 09385 20	GX024 09385 20 LK
30 g	EVF D24 30g Si60 40-63µm	30	GX024 09385 30	GX024 09385 30 LK
40 g	EVF D31 40g Si60 40-63µm	20	GX031 09385 40	GX031 09385 40 LK
50 g	EVF D31 50g Si60 40-63µm	20	GX031 09385 50	GX031 09385 50 LK
70 g	EVF D31 70g Si60 40-63µm	20	GX031 09385 70	GX031 09385 70 LK
80 g	EVF D44 80g Si60 40-63µm	20	GX044 09385 80	GX044 09385 80 LK
100 g	EVF D44 100g Si60 40-63µm	10	GX044 09385 100	GX044 09385 100 LK
130 g	EVF D44 130g Si60 40-63µm	10	GX044 09385 130	GX044 09385 130 LK
150g	EVF D44 150g Si60 40-63µm	10	GX044 09385 150	GX044 09385 150 LK

Pharmprep 60 CC 25-40 µm - Spherical silica

Weight	Description	Qty / pack	Reference Luer	Reference Luer-Lock
5 g	EVF D17 5g Pharmprep 60CC 25-40µm	30	GX017 09371 5	GX017 09371 5 LK
10 g	EVF D17 10g Pharmprep 60CC 25-40µm	30	GX017 09371 10	GX017 09371 10 LK
15 g	EVF D17 15g Pharmprep 60CC 25-40µm	30	GX017 09371 15	GX017 09371 15 LK
20 g	EVF D24 20g Pharmprep 60CC 25-40µm	30	GX024 09371 20	GX024 09371 20 LK
30 g	EVF D24 30g Pharmprep 60CC 25-40µm	30	GX024 09371 30	GX024 09371 30 LK
40 g	EVF D31 40g Pharmprep 60CC 25-40µm	20	GX031 09371 40	GX031 09371 40 LK
50 g	EVF D31 50g Pharmprep 60CC 25-40µm	20	GX031 09371 50	GX031 09371 50 LK
70 g	EVF D31 70g Pharmprep 60CC 25-40µm	20	GX031 09371 70	GX031 09371 70 LK
80 g	EVF D44 80g Pharmprep 60CC 25-40µm	20	GX044 09371 80	GX044 09371 80 LK
100 g	EVF D44 100g Pharmprep 60CC 25-40µm	10	GX044 09371 100	GX044 09371 100 LK
130 g	EVF D44 130g Pharmprep 60CC 25-40µm	10	GX044 09371 130	GX044 09371 130 LK
150g	EVF D44 150g Pharmprep 60CC 25-40µm	10	GX044 09371 150	GX044 09371 150 LK

Empty cartridges

- Ideal dry loading cartridge : up to10 bar stability
- Perfect solution for large dry loadings
- "No-Leak" cap technology !

Tip : Add silica over the dry loading, so as to reach the requested bed height needed to screw the cap.

Cartridge size	Sample	Silica needed	For use with
D17 5g	1-3 g	4 g	10-100 g cartridges
D17 10g	2-5 g	9 g	100-200 g cartridges
D17 15g	3-8 g	14 g	150-300g cartridges
D24 20g	4-10 g	18 g	200-400g cartridges
D24 30g	6-15 g	27 g	300-600g cartridges
D31 40g	8-20 g	37 g	400-800g cartridges
D31 50g	10-25 g	46 g	500g-1 Kg cartridges
D31 70g	14-35 g	66 g	700g-1,4 Kg cartridges
D44 80g	16-40 g	76 g	800g-1,6 Kg cartridges
D44 100g	20-50 g	96 g	1,0-2,0 Kg cartridges
D44 130g	26-65 g	126 g	1,3-2,6 Kg cartridges
D44 150g	30-75 g	145 g	1,5-3,0 Kg cartridges

Empty cartridges (with frits, filters, o-rings)

Weight	Description	Qty / pack	Reference Luer	Reference Luer-Lock
5 g	EVF D17 empty cartridge 5g	50	GXE017 5	GXE017 5 LK
10 g	EVF D17 empty cartridge 10g	50	GXE017 10	GXE017 10 LK
15 g	EVF D17 empty cartridge 15g	50	GXE017 15	GXE017 15 LK
20 g	EVF D24 empty cartridge 20g	50	GXE024 20	GXE024 20 LK
30 g	EVF D24 empty cartridge 30g	50	GXE024 30	GXE024 30 LK
40 g	EVF D31 empty cartridge 40g	50	GXE031 40	GXE031 40 LK
50 g	EVF D31 empty cartridge 50g	50	GXE031 50	GXE031 50 LK
70 g	EVF D31 empty cartridge 70g	50	GXE031 70	GXE031 70 LK
80 g	EVF D44 empty cartridge 80g	20	GXE044 80	GXE044 80 LK
100 g	EVF D44 empty cartridge 100g	10	GXE044 100	GXE044 100 LK
130 g	EVF D44 empty cartridge 130g	10	GXE044 130	GXE044 130 LK
150g	EVF D44 empty cartridge 150g	10	GXE044 150	GXE044 150 LK

Dry Loading cartridges

- EasyVarioFlash® DL (Dry Loading) are packed with 10% less silica, to give room for the dry loading sample.
- Just add the dry loading prepared with the indicated silica weight
- Efficient, and economical : one unique cartridge is needed !

NB : These cartridges can NOT be run without dry loading !!

Cartridge size	Silica needed	Sample capacity
D17 9g DL	1 g	300 mg (100-750 mg)
D17 14g DL	1,5 g	450 mg (0,15-1,1g)
D24 18g DL	2 g	600 mg (0,20-1,5 g)
D24 27g DL	3 g	900 mg (0,30-2,2 g)
D31 36g DL	4 g	1,2 g (0,4-3,0 g)
D31 45g DL	5 g	1,5 g (0,5-3,8 g)
D31 63g DL	7 g	2,1 g (0,7-5,3 g)
D44 72g DL	8 g	2,4 g (0,8-6,0 g)
D44 90g DL	10 g	3,0 g (1,0-7,5 g)
D44 117g DL	13 g	3,9 g (1,3-9,8 g)
D44 135g DL	15 g	4,5 g (1,5-11,3 g)

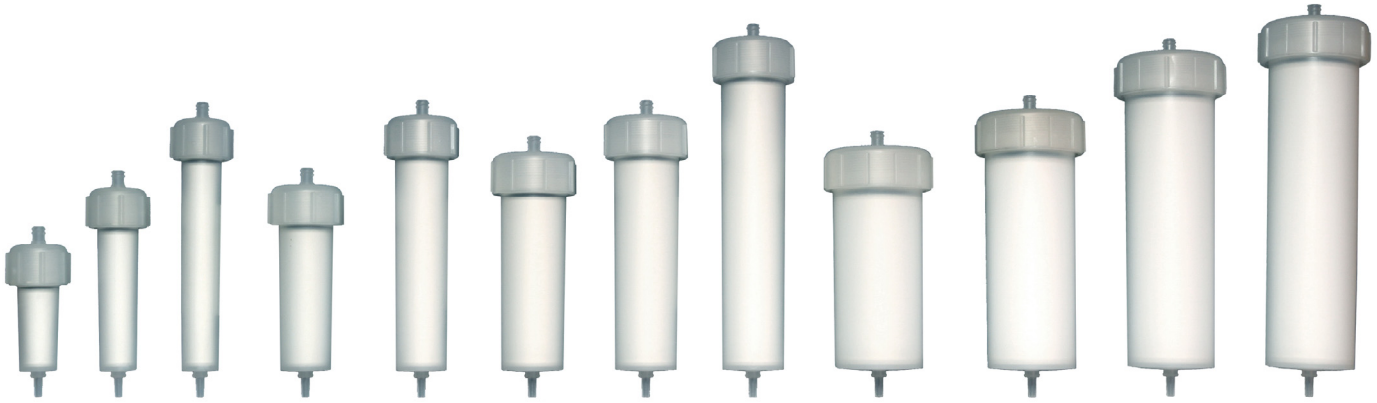
Dry Loading Si60 15-40 µm (with additional frits)

Weight	Description	Qty / pack	Reference Luer	Reference Luer-Lock
9 g	EVF D17 9g DL Si60 15-40µm	30	GX017 15111 9DL	GX017 15111 9DL LK
14 g	EVF D17 14g DL Si60 15-40µm	30	GX017 15111 14DL	GX017 15111 14DL LK
18 g	EVF D24 18g DL Si60 15-40µm	30	GX024 15111 18DL	GX024 15111 18DL LK
27 g	EVF D24 27g DL Si60 15-40µm	30	GX024 15111 27DL	GX024 15111 27DL LK
36 g	EVF D31 36g DL Si60 15-40µm	20	GX031 15111 36DL	GX031 15111 36DL LK
45 g	EVF D31 45g DL Si60 15-40µm	20	GX031 15111 45DL	GX031 15111 45DL LK
63 g	EVF D31 63g DL Si60 15-40µm	20	GX031 15111 63DL	GX031 15111 63DL LK
72 g	EVF D44 72g DL Si60 15-40µm	20	GX044 15111 72DL	GX044 15111 72DL LK
90 g	EVF D44 90g DL Si60 15-40µm	10	GX044 15111 90DL	GX044 15111 90DL LK
117 g	EVF D44 117g DL Si60 15-40µm	10	GX044 15111 117DL	GX044 15111 117DL LK
135 g	EVF D44 135g DL Si60 15-40µm	10	GX044 15111 135DL	GX044 15111 135DL LK

Dry Loading Si60 40-63 µm (with additional frits)

Weight	Description	Qty / pack	Reference Luer	Reference Luer-Lock
9 g	EVF D17 9g DL Si60 40-63µm	30	GX017 09385 9DL	GX017 09385 9DL LK
14 g	EVF D17 14g DL Si60 40-63µm	30	GX017 09385 14DL	GX017 09385 14DL LK
18 g	EVF D24 18g DL Si60 40-63µm	30	GX024 09385 18DL	GX024 09385 18DL LK
27 g	EVF D24 27g DL Si60 40-63µm	30	GX024 09385 27DL	GX024 09385 27DL LK
36 g	EVF D31 36g DL Si60 40-63µm	20	GX031 09385 36DL	GX031 09385 36DL LK
45 g	EVF D31 45g DL Si60 40-63µm	20	GX031 09385 45DL	GX031 09385 45DL LK
63 g	EVF D31 63g DL Si60 40-63µm	20	GX031 09385 63DL	GX031 09385 63DL LK
72 g	EVF D44 72g DL Si60 40-63µm	20	GX044 09385 72DL	GX044 09385 72DL LK
90 g	EVF D44 90g DL Si60 40-63µm	10	GX044 09385 90DL	GX044 09385 90DL LK
117 g	EVF D44 117g DL Si60 40-63µm	10	GX044 09385 117DL	GX044 09385 117DL LK
135 g	EVF D44 135g DL Si60 40-63µm	10	GX044 09385 135DL	GX044 09385 135DL LK

Aluminium Oxide cartridges



Aluminium oxide is an interesting alternative to silica when the compound to purify is :

- **Acidic :**
  Acidic aluminium oxide avoids the use of additional TFA or others modifiers to reduce peak tailing.
- **Basic :**
  Basic aluminium oxide avoids acid-base interactions occuring with silica (which is slightly acidic). Basic modifiers (Ammonia, TEA,...) can thus be avoided.
- **pH-sensitive :**
  Neutral aluminium oxide avoids compound's degradation due to the silica acidity.

Acidic Aluminium Oxide pH=3,5-4,5

Weight	Description	Qty / pack	Reference Luer	Reference Luer-Lock
10 g	EVF D17 10g Acidic Aluminium oxide	30	GX017 01078 5	GX017 01078 5 LK
20 g	EVF D17 20g Acidic Aluminium oxide	30	GX017 01078 10	GX017 01078 10 LK
30 g	EVF D17 30g Acidic Aluminium oxide	30	GX017 01078 15	GX017 01078 15 LK
40 g	EVF D24 40g Acidic Aluminium oxide	30	GX024 01078 20	GX024 01078 20 LK
60 g	EVF D24 60g Acidic Aluminium oxide	30	GX024 01078 30	GX024 01078 30 LK
80 g	EVF D31 80g Acidic Aluminium oxide	20	GX031 01078 40	GX031 01078 40 LK
100 g	EVF D31 100g Acidic Aluminium oxide	20	GX031 01078 50	GX031 01078 50 LK
140 g	EVF D31 140g Acidic Aluminium oxide	20	GX031 01078 70	GX031 01078 70 LK
160 g	EVF D44 160g Acidic Aluminium oxide	20	GX044 01078 80	GX044 01078 80 LK
200 g	EVF D44 200g Acidic Aluminium oxide	10	GX044 01078 100	GX044 01078 100 LK
260 g	EVF D44 260g Acidic Aluminium oxide	10	GX044 01078 130	GX044 01078 130 LK
300 g	EVF D44 300g Acidic Aluminium oxide	10	GX044 01078 150	GX044 01078 150 LK

Neutral Aluminium Oxide pH=6,8-7,8

Weight	Description	Qty / pack	Reference Luer	Reference Luer-Lock
10 g	EVF D17 10g Neutral Aluminium oxide	30	GX017 01077 5	GX017 01077 5 LK
20 g	EVF D17 20g Neutral Aluminium oxide	30	GX017 01077 10	GX017 01077 10 LK
30 g	EVF D17 30g Neutral Aluminium oxide	30	GX017 01077 15	GX017 01077 15 LK
40 g	EVF D24 40g Neutral Aluminium oxide	30	GX024 01077 20	GX024 01077 20 LK
60 g	EVF D24 60g Neutral Aluminium oxide	30	GX024 01077 30	GX024 01077 30 LK
80 g	EVF D31 80g Neutral Aluminium oxide	20	GX031 01077 40	GX031 01077 40 LK
100 g	EVF D31 100g Neutral Aluminium oxide	20	GX031 01077 50	GX031 01077 50 LK
140 g	EVF D31 140g Neutral Aluminium oxide	20	GX031 01077 70	GX031 01077 70 LK
160 g	EVF D44 160g Neutral Aluminium oxide	20	GX044 01077 80	GX044 01077 80 LK
200 g	EVF D44 200g Neutral Aluminium oxide	10	GX044 01077 100	GX044 01077 100 LK
260 g	EVF D44 260g Neutral Aluminium oxide	10	GX044 01077 130	GX044 01077 130 LK
300 g	EVF D44 300g Neutral Aluminium oxide	10	GX044 01077 150	GX044 01077 150 LK

Basic Aluminium Oxide pH=8,5-10,5

Weight	Description	Qty / pack	Reference Luer	Reference Luer-Lock
10 g	EVF D17 10g Basic Aluminium oxide	30	GX017 01076 5	GX017 01076 5 LK
20 g	EVF D17 20g Basic Aluminium oxide	30	GX017 01076 10	GX017 01076 10 LK
30 g	EVF D17 30g Basic Aluminium oxide	30	GX017 01076 15	GX017 01076 15 LK
40 g	EVF D24 40g Basic Aluminium oxide	30	GX024 01076 20	GX024 01076 20 LK
60 g	EVF D24 60g Basic Aluminium oxide	30	GX024 01076 30	GX024 01076 30 LK
80 g	EVF D31 80g Basic Aluminium oxide	20	GX031 01076 40	GX031 01076 40 LK
100 g	EVF D31 100g Basic Aluminium oxide	20	GX031 01076 50	GX031 01076 50 LK
140 g	EVF D31 140g Basic Aluminium oxide	20	GX031 01076 70	GX031 01076 70 LK
160 g	EVF D44 160g Basic Aluminium oxide	20	GX044 01076 80	GX044 01076 80 LK
200 g	EVF D44 200g Basic Aluminium oxide	10	GX044 01076 100	GX044 01076 100 LK
260 g	EVF D44 260g Basic Aluminium oxide	10	GX044 01076 130	GX044 01076 130 LK
300 g	EVF D44 300g Basic Aluminium oxide	10	GX044 01076 150	GX044 01076 150 LK

RP18, CN, NH2, Diol cartridges

Grafted silica are suited for separation problems that cannot be adequately solved with unmodified silica (Si60).
Grafted silica have their degree of hydrophobicity classified as follows : RP18 > CN (Cyano) > NH2 (Amino) > Diol

- RP18 : Reversed mode only
- CN and NH2: Can be used in reversed and normal mode
- NH2 : Normal mode only

RP18 25-40 µm - Irregular silica

Weight	Description	Qty / pack	Reference Luer	Reference Luer-Lock
5 g	EVF D17 5g RP18 25-40µm	10	GX017 09303 5	GX017 09303 5 LK
10 g	EVF D17 10g RP18 25-40µm	10	GX017 09303 10	GX017 09303 10 LK
15 g	EVF D17 15g RP18 25-40µm	10	GX017 09303 15	GX017 09303 15 LK
20 g	EVF D24 20g RP18 25-40µm	10	GX024 09303 20	GX024 09303 20 LK
30 g	EVF D24 30g RP18 25-40µm	10	GX024 09303 30	GX024 09303 30 LK
40 g	EVF D31 40g RP18 25-40µm	5	GX031 09303 40	GX031 09303 40 LK
50 g	EVF D31 50g RP18 25-40µm	5	GX031 09303 50	GX031 09303 50 LK
70 g	EVF D31 70g RP18 25-40µm	5	GX031 09303 70	GX031 09303 70 LK
80 g	EVF D44 80g RP18 25-40µm	5	GX044 09303 80	GX044 09303 80 LK
100 g	EVF D44 100g RP18 25-40µm	3	GX044 09303 100	GX044 09303 100 LK
130 g	EVF D44 130g RP18 25-40µm	3	GX044 09303 130	GX044 09303 130 LK
150g	EVF D44 150g RP18 25-40µm	3	GX044 09303 150	GX044 09303 150 LK

RP18 40-63 µm - Irregular silica

Weight	Description	Qty / pack	Reference Luer	Reference Luer-Lock
5 g	EVF D17 5g RP18 40-63µm	10	GX017 10167 5	GX017 10167 5 LK
10 g	EVF D17 10g RP18 40-63µm	10	GX017 10167 10	GX017 10167 10 LK
15 g	EVF D17 15g RP18 40-63µm	10	GX017 10167 15	GX017 10167 15 LK
20 g	EVF D24 20g RP18 40-63µm	10	GX024 10167 20	GX024 10167 20 LK
30 g	EVF D24 30g RP18 40-63µm	10	GX024 10167 30	GX024 10167 30 LK
40 g	EVF D31 40g RP18 40-63µm	5	GX031 10167 40	GX031 10167 40 LK
50 g	EVF D31 50g RP18 40-63µm	5	GX031 10167 50	GX031 10167 50 LK
70 g	EVF D31 70g RP18 40-63µm	5	GX031 10167 70	GX031 10167 70 LK
80 g	EVF D44 80g RP18 40-63µm	5	GX044 10167 80	GX044 10167 80 LK
100 g	EVF D44 100g RP18 40-63µm	3	GX044 10167 100	GX044 10167 100 LK
130 g	EVF D44 130g RP18 40-63µm	3	GX044 10167 130	GX044 10167 130 LK
150g	EVF D44 150g RP18 40-63µm	3	GX044 10167 150	GX044 10167 150 LK

CN 40-63 µm - Irregular silica

Weight	Description	Qty / pack	Reference Luer	Reference Luer-Lock
5 g	EVF D17 5g CN 40-63µm	10	GX017 13959 5	GX017 13959 5 LK
10 g	EVF D17 10g CN 40-63µm	10	GX017 13959 10	GX017 13959 10 LK
15 g	EVF D17 15g CN 40-63µm	10	GX017 13959 15	GX017 13959 15 LK
20 g	EVF D24 20g CN 40-63µm	10	GX024 13959 20	GX024 13959 20 LK
30 g	EVF D24 30g CN 40-63µm	10	GX024 13959 30	GX024 13959 30 LK
40 g	EVF D31 40g CN 40-63µm	5	GX031 13959 40	GX031 13959 40 LK
50 g	EVF D31 50g CN 40-63µm	5	GX031 13959 50	GX031 13959 50 LK
70 g	EVF D31 70g CN 40-63µm	5	GX031 13959 70	GX031 13959 70 LK
80 g	EVF D44 80g CN 40-63µm	5	GX044 13959 80	GX044 13959 80 LK
100 g	EVF D44 100g CN 40-63µm	3	GX044 13959 100	GX044 13959 100 LK
130 g	EVF D44 130g CN 40-63µm	3	GX044 13959 130	GX044 13959 130 LK
150g	EVF D44 150g CN 40-63µm	3	GX044 13959 150	GX044 13959 150 LK

NH2 40-63 µm - Irregular silica

Weight	Description	Qty / pack	Reference Luer	Reference Luer-Lock
5 g	EVF D17 5g NH2 40-63µm	10	GX017 13974 5	GX017 13974 5 LK
10 g	EVF D17 10g NH2 40-63µm	10	GX017 13974 10	GX017 13974 10 LK
15 g	EVF D17 15g NH2 40-63µm	10	GX017 13974 15	GX017 13974 15 LK
20 g	EVF D24 20g NH2 40-63µm	10	GX024 13974 20	GX024 13974 20 LK
30 g	EVF D24 30g NH2 40-63µm	10	GX024 13974 30	GX024 13974 30 LK
40 g	EVF D31 40g NH2 40-63µm	5	GX031 13974 40	GX031 13974 40 LK
50 g	EVF D31 50g NH2 40-63µm	5	GX031 13974 50	GX031 13974 50 LK
70 g	EVF D31 70g NH2 40-63µm	5	GX031 13974 70	GX031 13974 70 LK
80 g	EVF D44 80g NH2 40-63µm	5	GX044 13974 80	GX044 13974 80 LK
100 g	EVF D44 100g NH2 40-63µm	3	GX044 13974 100	GX044 13974 100 LK
130 g	EVF D44 130g NH2 40-63µm	3	GX044 13974 130	GX044 13974 130 LK
150g	EVF D44 150g NH2 40-63µm	3	GX044 13974 150	GX044 13974 150 LK

Diol 40-63 µm - Irregular silica

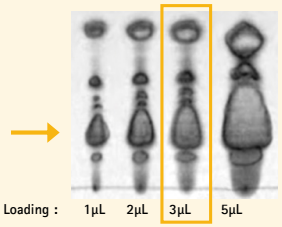
Weight	Description	Qty / pack	Reference Luer	Reference Luer-Lock
5 g	EVF D17 5g Diol 40-63µm	10	GX017 13973 5	GX017 13973 5 LK
10 g	EVF D17 10g Diol 40-63µm	10	GX017 13973 10	GX017 13973 10 LK
15 g	EVF D17 15g Diol 40-63µm	10	GX017 13973 15	GX017 13973 15 LK
20 g	EVF D24 20g Diol 40-63µm	10	GX024 13973 20	GX024 13973 20 LK
30 g	EVF D24 30g Diol 40-63µm	10	GX024 13973 30	GX024 13973 30 LK
40 g	EVF D31 40g Diol 40-63µm	5	GX031 13973 40	GX031 13973 40 LK
50 g	EVF D31 50g Diol 40-63µm	5	GX031 13973 50	GX031 13973 50 LK
70 g	EVF D31 70g Diol 40-63µm	5	GX031 13973 70	GX031 13973 70 LK
80 g	EVF D44 80g Diol 40-63µm	5	GX044 13973 80	GX044 13973 80 LK
100 g	EVF D44 100g Diol 40-63µm	3	GX044 13973 100	GX044 13973 100 LK
130 g	EVF D44 130g Diol 40-63µm	3	GX044 13973 130	GX044 13973 130 LK
150g	EVF D44 150g Diol 40-63µm	3	GX044 13973 150	GX044 13973 150 LK

TLC / Flash transposition

The goal of TLC / Flash transposition is to determine which cartridge's size to use, and how much sample to apply, in order to obtain the desired purity of the selected spot(s).

Step 1

Identify the convenient solvents with TLC plates, and check how the sample behaves when loading increases



Elution force should be chosen so as to elute the desired compound around Rf=0,15-0,20.
In the example beside, solvents where Heptan 80% / Ethyl Acetate 20%.

Prepare a TLC with 4 spots of sample covering 1-10µL if sample is concentrated, and 1-25µL otherwise.

In our example, desired compound clearly covers the 2 impurities in front, when loading exceeds 3µL.

➡ Loading was therefore fixed at 3µL.

Step 2

Select cartridge size

Having determined in step 1 what the maximum loading of silica is, we can apply the transposition formula :

1µL sample loaded on TLC

↓

1 mL of same sample to inject / 100 g of silica in Flash

Cartridge size is then easy to calculate, on basis of total sample volume to purify : 15 ml will need a 500 g cartridge if TLC loading is 3µL
(15 / 3 x 100 = 500).

NB : Cartridges having a silica bed length > 200 mm can be loaded around 2 mL per 100g of silica.

Step 3

Select injection mode and elution parameters

If the % of strong eluting solvent in the sample solution is more than 10% higher than the TLC conditions, prepare a dry loading (see below). Otherwise, condition the cartridge, and inject directly through the Luer-Lock inlet (or on the frit for samples showing crystallisation problems).

TLC

B = % of strong eluting solvent
Rf = Rf of the compound to purify

Isocratic elution

% strong eluting solvent :
cartridge's bed length < 200 mm ➡ B / (8x Rf)
cartridge's bed length > 200 mm ➡ B / (6x Rf)

Gradient elution

% strong eluting solvent :

t = 0	0%
t = 5xCV / Fr	0,2xB / Rf
t = 20xCV / Fr	100%

CV = Column Volume in mL (= 2x silica weight in g)
Fr = Pump Flowrate in mL/min

Dry Loading

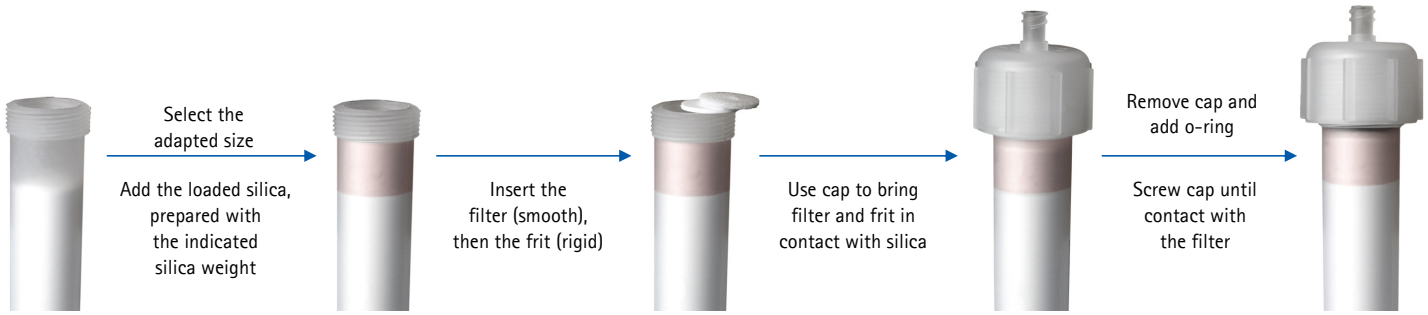
Dry loading preparation

Dissolve the sample in a very good solvent : use 10 ml / g of sample.
Add 2g of silica / g of sample.
Mix, and evaporate in a rotatory evaporator. The loaded silica should not be sticky.

Dry loading in an empty pre-column

NB : During packing, tap gently the cartridge to help silica to settle. When screwing the cap, do not screw too strongly. Just screw until contact with the frit.
Start elution with 100% non-eluting solvent, for 1 minute, to wet the dry loading without eluting the compounds.

Direct Dry loading in a special DL cartridge



NB : We recommend to condition the cartridge prior to inserting the dry loading : put o-ring on the cap, and screw the cap on the cartridge.
Sealing is sufficient for the duration of the conditioning, even if there is no contact of the o-ring with the frits.

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