

# RediSep<sup>®</sup>

Consumables for Flash and Preparative Chromatography





Reliable RediSep flash and preparative chromatography products consistently produce high purity compounds. You'll enjoy fast, easy purification and scale-up from milligrams to hundreds of grams.

### Reliable and Reproducible

RediSep columns are precision packed for high resolution and reproducibility. They feature a one-piece design with luer end fittings for quick, easy connection to Teledyne ISCO CombiFlash® and other chromatography systems. RediSep sets the standard in flash chromatography columns.

### Versatile

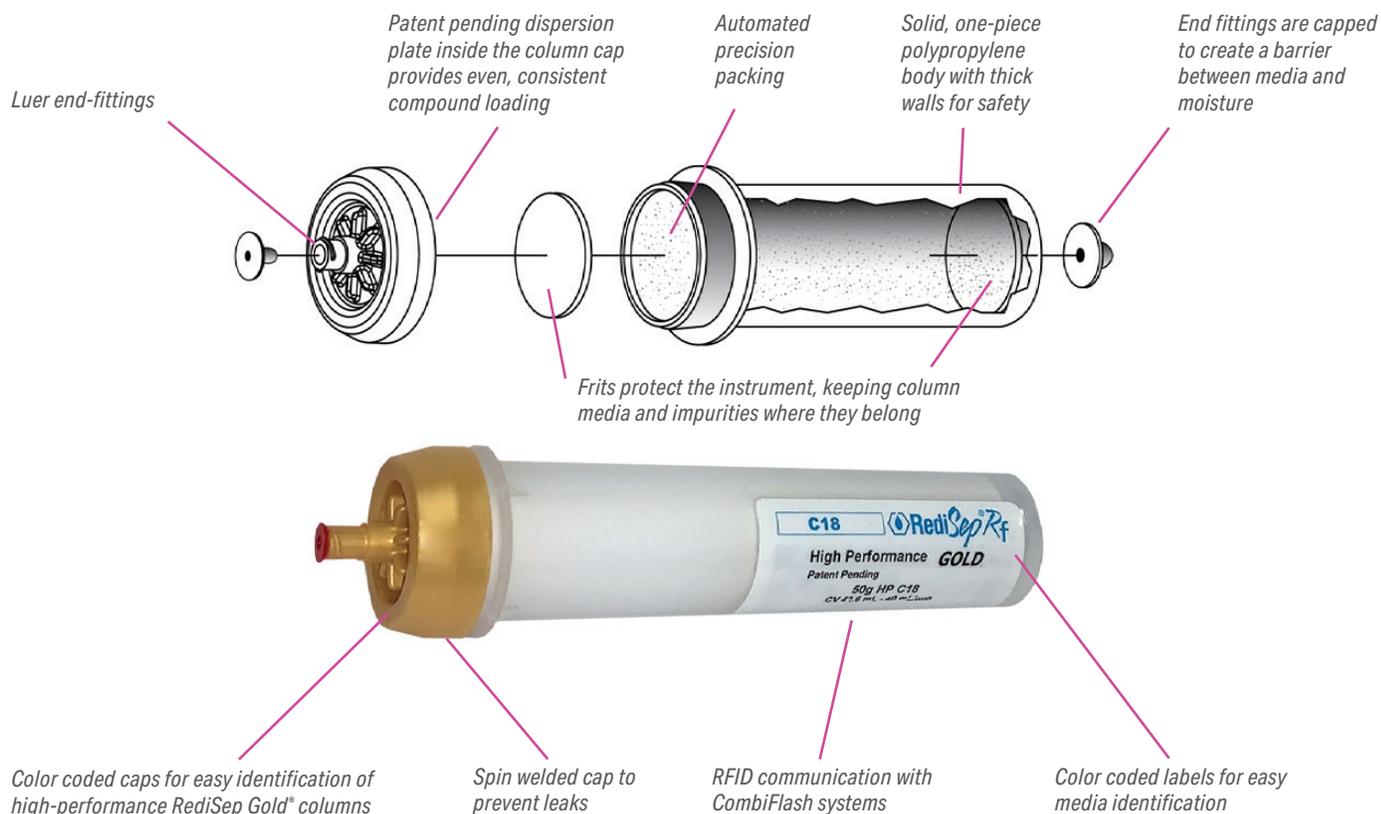
RediSep columns are available in 4 gram up to 3 kg column sizes, allowing purification from 10 milligrams up to 300 grams. The enhanced product offering with high-performance Gold and a variety of stationary phases expands the utility of RediSep. TLC plates make method development easy.

### RFID Confidence

Through RFID (Radio Frequency Identification) technology, the CombiFlash NextGen, EZ Prep, and Torrent® systems automatically detect the column type and size and program a default method optimized for the RediSep column. Method automation reduces setup time and the potential for errors.

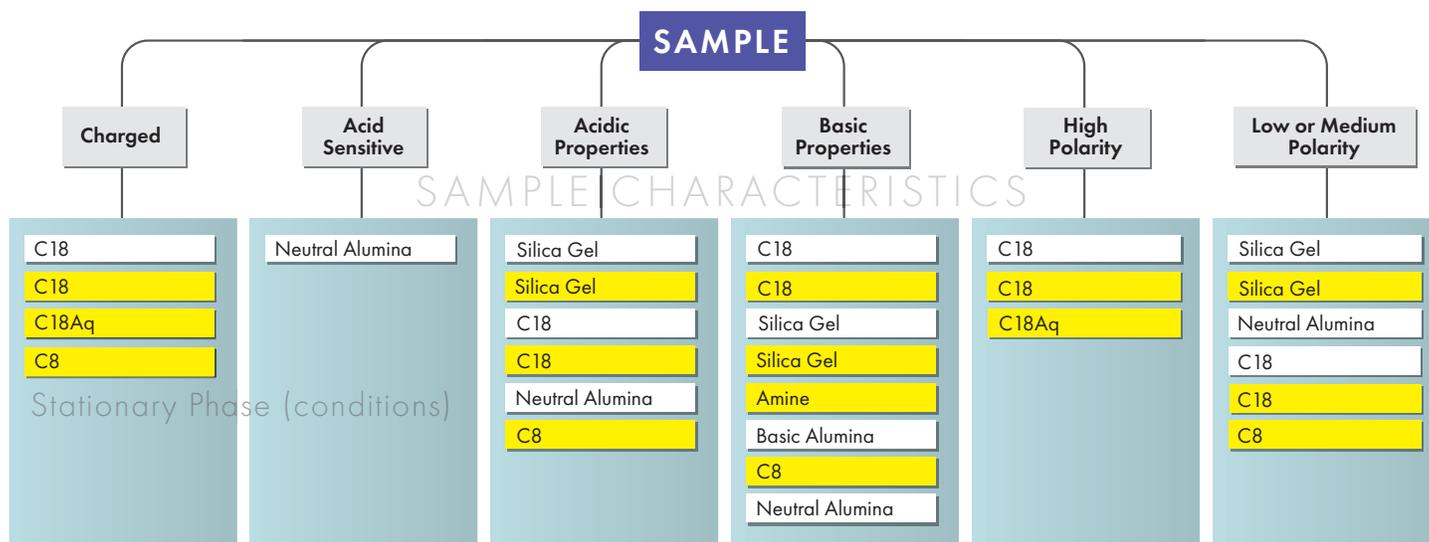
### Safe

Extra thick walls on the RediSep columns and cartridges are pressure rated for safe operation. Machine welded end fittings ensure the column can withstand the pressure modern flash systems are capable of and not and not leak valuable compound.



U.S. Patent # 7,008,541. EU Patent # 1,316,798.

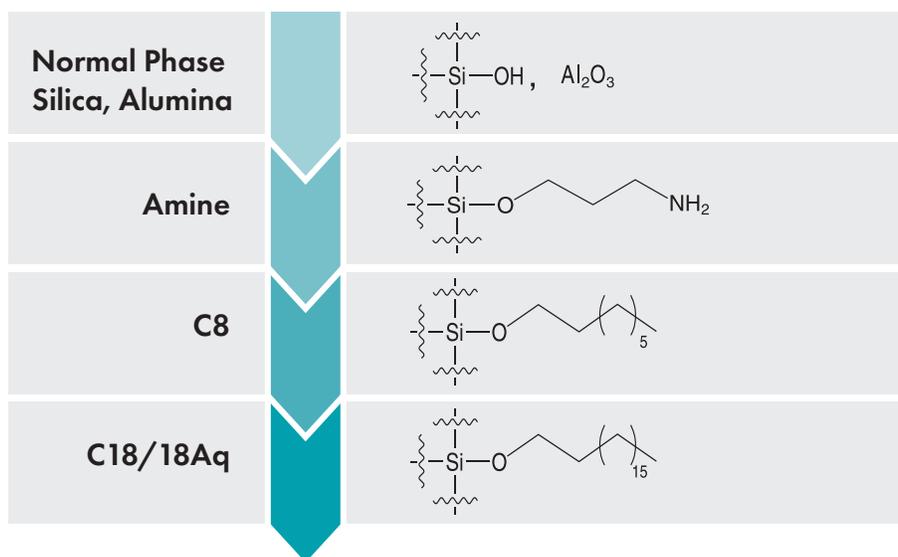
# Column Media Selection Guide



40–60 μm irregular media RediSep columns.  
 20–40 μm spherical media RediSep Gold® high-performance columns.

## Stationary Phase Media

Decreasing RediSep Media Polarity





## High-performance Flash Chromatography

### Resolution with Speed

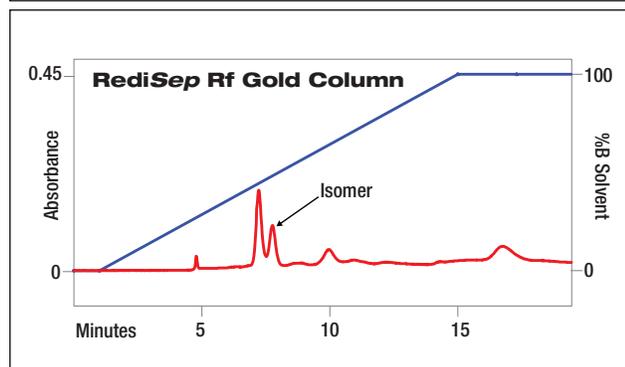
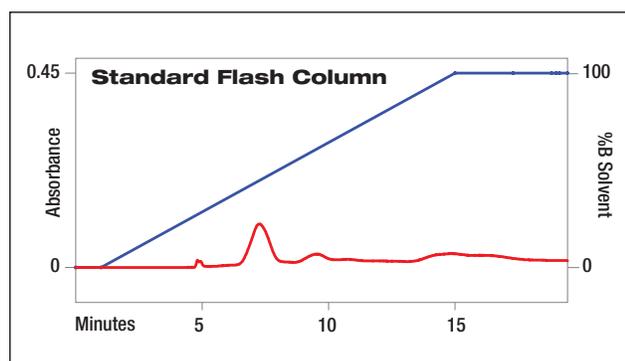
As a pioneer in flash chromatography, Teledyne ISCO continues to bring you the latest innovations to improve your productivity. RediSep Gold high-performance flash columns deliver superior sample purity through the use of fine spherical silica gel (20–40  $\mu\text{m}$ ).

RediSep Gold spherical silica provides improved performance without increasing the back pressure. Spherical packing creates the best possible linear beds for even separations. Spherical silica is available bare, or bonded with C18, C18Aq, C8, and amine.

### Gold Resolution— $\Delta R_f \leq 0.1$

Improve your resolution with smaller particles. Patented spherical flash media creates the benefit of tighter packing without an increase in back pressure.

- Provide twice the resolving power of typical disposable flash chromatography columns
- Separate difficult compounds with low  $\Delta R_f$ , such as isomers or trace compounds
- Purify your tough compounds on a single column



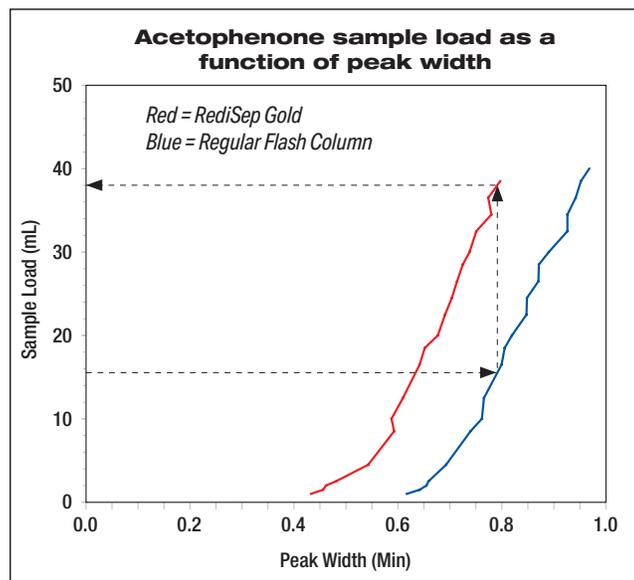
### Run Conditions:

Column size:	40 g
Load:	.333 g (on 5 g cartridge)
Solvents:	Hexane & Ethyl Acetate
Flow rate:	40 mL/min
Run time:	19.4 min

For complete information, see Application Note AN70 at [teledynelabs.com/en-us/chromatography/application-notes](http://teledynelabs.com/en-us/chromatography/application-notes)

## Gold High Load

Take advantage of the extra resolution to load twice as much compound on the RediSep Gold column. Choose a smaller column size and save time and solvent.



### Run Conditions:

Column size: 12 g RediSep Gold spherical silica column  
12 g competitor's irregular silica column

Loads: 0.02–0.80 g (0.2–7% load)

Solvents: Hexane & Ethyl Acetate

See poster reprint "Spherical Silica Increases Loading Capacity" at [teledynelabs.com/products/lcappnotes.asp](http://teledynelabs.com/products/lcappnotes.asp) for complete information

## Solvent Savings by Going Green with Gold

Column Size	Easy Separation Gold RediSep ( $\Delta CV > 5$ ) 20% Loading	Easy Separation ( $\Delta CV > 1$ ) 10% LOADING
4 g	800 mg	400 mg
12 g	2.4 g	1.2 g
24 g	4.8 g	2.4 g
40 g	8.0 g	4.0 g
80 g	16.0 g	8.0 g
120 g	24 g	12 g
220 g	44 g	22 g
330 g	66 g	33 g

190 mL

270 mL

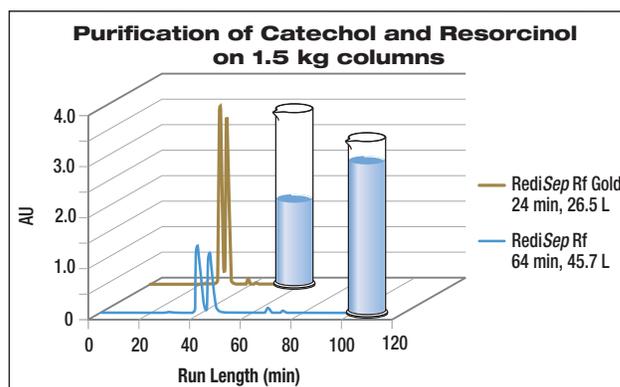
650 mL

1.7 L

## Gold Speed— $\Delta Rf > 0.1$

Take advantage of the sharper peaks provided by spherical media to shorten purification time. Convert your methods to Gold Speed at a click of a button with PeakTrak® software.

- Save up to 60% on time and 25% on solvents
- Separate silica sensitive compounds faster
- Dry compounds faster by collecting two-thirds the fraction volume.



### Run Conditions:

Column size: 40 g

Load: 0.4 g (1% load)

Solvents: Hexane & Ethyl Acetate

Flow rate: 40 mL/min, 80 mL/min

For complete information, see Application Note AN72 at [teledynelabs.com/en-us/chromatography/application-notes](http://teledynelabs.com/en-us/chromatography/application-notes)

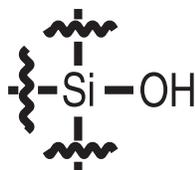
## The RFID Advantage

Simply select between Gold Resolution and Gold Speed methods on CombiFlash systems with RFID.



# **RediSep Gold<sup>®</sup>** **Normal Phase Silica**

RediSep Gold high-performance flash columns deliver superior sample purity through the use of fine spherical silica gel (20–40 µm). RediSep Gold normal phase silica offers the capability to improve resolution and isolate difficult compounds such as isomers and impurities. Alternatively, the improved resolution can allow for faster run times or higher loads to save time and solvents.



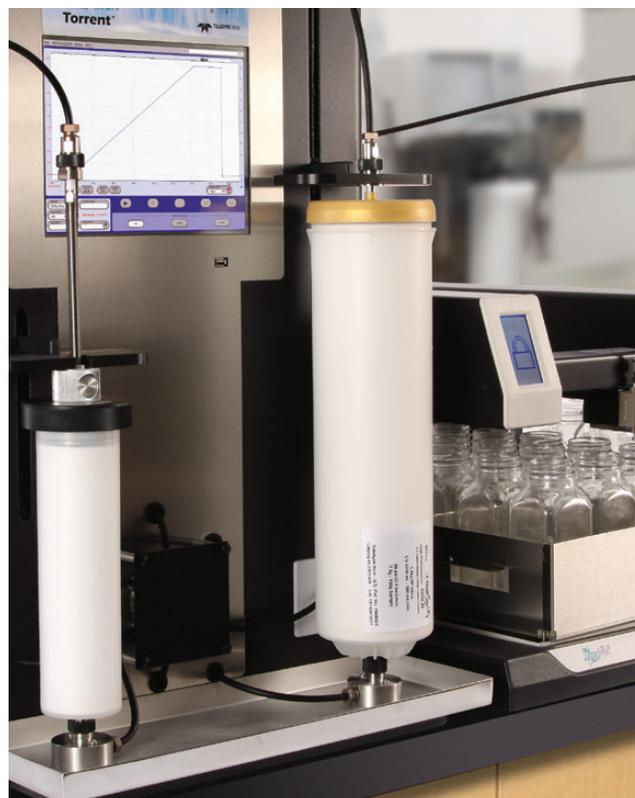
## Specifications:

- Reusability: Single use
- Particle size: 20–40 µm spherical
- Mesh size: 400–632
- Pore size: 60 Å
- Surface area m<sup>2</sup>/g: 500 ±50
- Loading capacity: 0.1–1% Gold Resolution  
1–10% Gold Speed  
2–20% Gold High Load

## RediSep Gold Normal Phase Silica Columns, 20–40 micron

Sample Load		Size	Qty/Pkg	Flow Rate (mL/min)	Catalog #
ΔCV≤1	ΔCV≥6				
20 mg	0.8 g	4 g	14	18	69-2203-344
60 mg	2.4 g	12 g	14	30	69-2203-345
120 mg	4.8 g	24 g	10	35	69-2203-346
200 mg	8 g	40 g	10	40	69-2203-347
400 mg	16 g	80 g	6	60	69-2203-348
600 mg	24 g	120 g	6	85	69-2203-349
1.1 g	44 g	220 g	4	150	69-2203-359
1.65 g	66 g	330 g	3	200	69-2203-369
3.8 g	150 g	750 g	3	300	69-2203-427
7.5 g	300 g	1.5 kg	2	600	69-2203-428
15 g	600 g	3.0 kg	1	950	69-2203-529
35 g	1400 g	7.0 kg*	1	1000	69-2203-921

\*Large-column tubing kit required, #60-2207-420

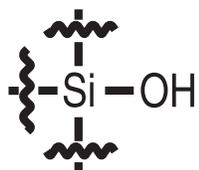


CombiFlash Torrent<sup>®</sup> scale-up purification system (left) shown paired with a Foxy<sup>®</sup> fraction collector (right).

# RediSep<sup>®</sup> Silver

## Normal Phase Silica

RediSep Silver disposable flash columns are designed for all-purpose purifications, with high resolution extraction of organic compounds from natural products, and excellent reproducibility in flavors and food chemistry applications.



### Specifications:

- Reusability: Single use
- Particle size: 40–63 µm irregular
- Mesh size: 230–400
- Pore size: 60 Å
- Surface area m<sup>2</sup>/g: 500 ±50
- Loading capacity: 0.1–10%

### RediSep Silver Normal Phase Disposable Flash Columns, 40–60 micron

Sample Load		Size	Qty/Pkg	Flow Rate (mL/min)	Catalog #
ΔCV≤1	ΔCV≥6				
20 mg	0.4 g	4 g	20	18	69-2203-304
60 mg	1.2 g	12 g	20	30	69-2203-312
120 mg	2.4 g	24 g	15	35	69-2203-324
200 mg	4 g	40 g	15	40	69-2203-340
400 mg	8 g	80 g	12	60	69-2203-380
600 mg	12 g	120 g	10	85	69-2203-320
Filter	12 g	125 g	6	200	69-2203-314
1.1 g	22 g	220 g	6	150	69-2203-422
1.65 g	33 g	330 g	4	200	69-2203-330
3.8 g	75 g	750 g	4	300	69-2203-275
7.5 g	150 g	1.5 kg	3	600	69-2203-277
15 g	300 g	3.0 kg	1	950	69-2203-527
35 g	700 g	7.0 kg*	1	1000	69-2203-922

\*Large-column tubing kit required, #60-2207-420



Large Column Adapter accessory supports 750 g, 1.5 kg, and 3.0 kg columns (sizes based on silica capacity).

### Sample Loading—ΔR<sub>f</sub> or ΔCV?

This catalog provides sample loading recommendations in ΔCV (column volumes). Here's how:

- ΔR<sub>f</sub> values are inversely proportional to the elution time of a component from a column as shown by:

$$CV = 1/R_f$$

- ΔCV can be determined using the following formula:

$$\Delta CV = 1/R_{f1} - 1/R_{f2}$$

- ΔCV is a better predictor for cartridge separations

Greater sample loads are possible with easy separations, or those with a ΔCV ≥6. As the ΔCV approaches ≤1, the separation becomes more difficult, necessitating lesser sample loading on the column or choosing a RediSep Gold high-resolution column.

# **RediSep** Gold<sup>®</sup> C18

RediSep Gold C18 reversed-phase columns are packed with 20–40 µm spherical bonded silica, providing improved separation. Achieve near prep-HPLC results with greater sample recovery to easily purify up to gram-scale on your flash system. The end-capped C18 chains allow up to 20 separations at pH 10 without degrading the silica.



## Specifications:

- Reusability: 20 runs (average)
- Particle size: 20–40 µm spherical
- Mesh size: 400–632
- Pore size: 100 Å
- Surface area m<sup>2</sup>/g: 300 ±50
- Carbon content: 15% ±2
- Endcapped: Yes
- Loading capacity: 0.1–2%

## RediSep Gold C18 Columns 20–40 micron

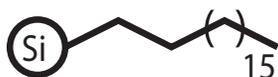
Sample Load		Size	Qty/Pkg	Flow Rate	Catalog #
ΔCV≤1	ΔCV≥6		(mL/min)		
5.5 mg	110 mg	5.5 g	2	18	69-2203-328
15.5 mg	310 mg	15.5 g	1	30	69-2203-334
30 mg	600 mg	30 g	1	35	69-2203-335
50 mg	1.0 g	50 g	1	40	69-2203-336
100 mg	2 g	100 g	1	60	69-2203-337
150 mg	3 g	150 g	1	85	69-2203-338
275 mg	5.5 g	275 g	1	150	69-2203-339
415 mg	8.3 g	415 g	1	200	69-2203-341
0.95 g	19 g	950 g	1	180	69-2203-492
1.9 g	38 g	1.9 kg	1	260	69-2203-493
3.8 g	76 g	3.8 kg	1	360	69-2203-528
8.6 g	172 g	8.6 kg	1	850	69-2203-900



8.6 kg Column

# RediSep Gold<sup>®</sup> C18Aq

RediSep Gold C18Aq is specifically designed for highly aqueous conditions. Monofunctionalized C18 bonding is interspersed with hydrophilic ligands to prevent phase collapse in highly aqueous conditions. RediSep Gold C18Aq should be used in separations requiring 0–50% organic. These columns offer increased retention through increased polar interactions and the ability to use a weaker solvent system. This is useful for highly polar, water soluble compounds such as dyes, glycopeptides, and nucleotides.



## Specifications:

- Reusability: 20 runs (average)
- Particle size: 20–40  $\mu\text{m}$  spherical
- Mesh size: 400–632
- Pore size: 100  $\text{\AA}$
- Surface area  $\text{m}^2/\text{g}$ : 300  $\pm 50$
- Carbon content: 11%  $\pm 2$
- Endcapped: Yes
- Loading capacity: 0.1–2%

## RediSep Gold C18Aq Columns 20–40 micron

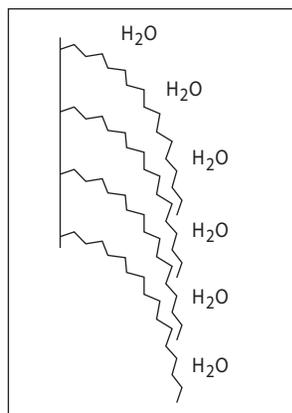
Sample Load		Size	Qty/Pkg	Flow Rate (mL/min)	Catalog #
$\Delta\text{CV} \leq 1$	$\Delta\text{CV} \geq 6$				
5.5 mg	110 mg	5.5 g	2	18	69-2203-558
15.5 mg	310 mg	15.5 g	1	30	69-2203-559
30 mg	600 mg	30 g	1	35	69-2203-560
50 mg	1.0 g	50 g	1	40	69-2203-561
100 mg	2 g	100 g	1	60	69-2203-562
150 mg	3 g	150 g	1	85	69-2203-563
275 mg	5.5 g	275 g	1	150	69-2203-564
415 mg	8.3 g	415 g	1	200	69-2203-565
1.9 g	38 g	1.9 kg	1	260	69-2203-567
3.8 g	76 g	3.8 kg	1	360	69-2203-568
8.6 g	172 g	8.6 kg	1	850	69-2203-918



Shown on a CombiFlash NextGen 300+ flash system.

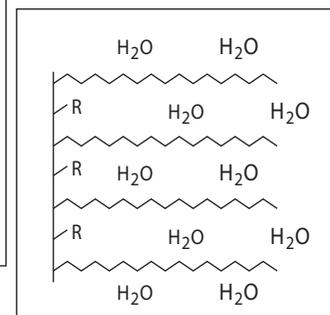
## C18 Silica

Phase Collapse/Dewetting



## C18Aq Silica

R= hydrophilic group



# RediSep<sup>®</sup> Silver C18

RediSep Silver C18 reversed-phase columns save time and money for the purification of medium to high polarity compounds, as well as ionic compounds. Packed with C18-derivatized silica, RediSep reversed-phase columns provide reproducible, high-capacity purification without the cost and complexity of prep-HPLC.



## Specifications:

- Reusability: 20 runs (average)
- Particle size: 40–63  $\mu\text{m}$  irregular
- Mesh size: 230–400
- Pore size: 60  $\text{\AA}$
- Surface area  $\text{m}^2/\text{g}$ : 500  $\pm$ 50
- Carbon Content: >17%
- Endcapped: Yes
- Loading capacity: 0.1–2%

## RediSep Silver C18 Columns 40–60 micron

Sample Load		Size	Qty/Pkg	Flow Rate (mL/min)	Catalog #
$\Delta\text{CV}\leq 1$	$\Delta\text{CV}\geq 6$				
4.3 mg	86 mg	4.3 g	2	18	69-2203-410
13 mg	260 mg	13 g	1	30	69-2203-411
43 mg	860 mg	43 g	1	40	69-2203-413
130 mg	2.6 g	130 g	1	85	69-2203-414
360 mg	7.2 g	360 g	1	200	69-2203-415



Shown on a CombiFlash<sup>®</sup> EZ Prep Hybrid Flash/Prep system.

## Storage Instructions for All C8 and C18 Columns

Proper storage will allow RediSep C18, RediSep Gold C8, RediSep Gold C18, and RediSep Gold C18Aq columns to be reused:

- Never allow the column to dry out after use. Turn off the air-purge on the instrument.\*
- Remove all organic modifiers by flushing the column with 3 column volumes of 50% methanol or acetonitrile in water.
- Store the column in 70–90% methanol or acetonitrile in water with end caps in place.

\*CombiFlash<sup>®</sup> NextGen, EZ Prep, and Torrent systems will turn off the column air purge as needed by reading the column RFID tag.

# RediSep Gold<sup>®</sup> C8

RediSep Gold C8 reversed-phase columns are packed with 20–40 µm spherical bonded silica, providing improved separation. Achieve near prep-HPLC results with greater sample recovery to easily purify up to gram-scale on your flash system. Increased pore size is optimized for purification of larger molecules like peptides and proteins.



## Specifications:

- Reusability: 20 runs (average)
- Particle size: 20–45 µm spherical
- Mesh size: 320–632
- Pore size: 200 Å
- Surface area m<sup>2</sup>/g: 150 ±50
- Carbon content: 4.5% ±2
- Endcapped: Yes
- Loading capacity: 0.1–2%

## RediSep Gold C8 Columns 20–40 micron

Sample Load		Size	Qty/Pkg	Flow Rate (mL/min)	Catalog #
ΔCV≤1	ΔCV≥6				
15.5 mg	310 mg	15.5 g	1	30	69-2203-710
50 mg	1.0 g	50 g	1	40	69-2203-712
150 mg	3 g	150 g	1	85	69-2203-714
8.6 g	172 g	8.6 kg	1	850	69-2203-919



## New Alternate Stationary Phase for Peptide and Protein Purification!

Our 200 Å C8 media offers larger pore silica for better resolution and peak shape in the purification of peptides and proteins. Larger molecules such as proteins and peptides cannot fully enter smaller pores, limiting the exterior surface-area available for molecule to stationary phase interaction.

The C8 modified silica offers an alternative selectivity suited for larger molecules with increasing hydrophobicities, improving both resolution and peak shape.

# RediSep Gold<sup>®</sup> Amine

RediSep Gold Amine columns can be used in either normal or reversed-phase conditions for the purification of compounds with basic properties by interacting with the hydrogen bonds. Functionalized amine silica protects the acidic silanol groups to result in sharper peaks and purity.

Useful in the separation of drug intermediates such as those with adenine, pyridine, or aniline groups. Use bonded amine to purify 2°, 3°, and heterocyclic amines without using dichloromethane. Amine media also eliminates the need to add a mobile phase modifier such as TEA, which reduces the time required to remove solvent from purified fractions.

Use caution when purifying aldehydes and ketones which may react with amine side chains to form imines. Test a small amount on a small column.



## Specifications:

- Reusability: 20 runs (average)
- Particle size: 20–40 µm spherical
- Mesh size: 400–632
- Pore size: 100 Å
- Surface area m<sup>2</sup>/g: 300 ±50
- Loading capacity: 0.1–2%

## RediSep Gold Amine Columns 20–40 micron

Sample Load		Size	Qty/Pkg (mL/min)	Flow Rate	Catalog #
ΔCV≤1	ΔCV≥6				
5.5 mg	110 mg	5.5 g	2	18	69-2203-504
15.5 mg	310 mg	15.5 g	1	30	69-2203-505
50 mg	1.0 g	50 g	1	40	69-2203-507
150 mg	3 g	150 g	1	85	69-2203-509
275 mg	5.5 g	275 g	1	150	69-2203-510
1.9 g	3.8 g	1.9 k	1	260	69-2203-513
3.8 g	7.6 kg	3.8 k	1	360	69-2203-534
8.6 g	172 g	8.6 kg	1	850	69-2203-920



Shown on a CombiFlash NextGen flash system.

## Storage Instructions for Amine Columns

Proper storage will allow Amine columns to be reused:

- Do not allow the column to dry out after first use. Turn off the air-purge on the instrument.\*
- If run solvents are immiscible with storage solvents, wash the column with an intermediate solvent.
- Remove all organic modifiers or strong organic solvents by flushing the column with 3 column volumes of 80% acetonitrile in water or 100% isopropanol.
- Store the column in flush solvent with end caps in place.

\*CombiFlash<sup>®</sup> NextGen, EZ Prep, and Torrent will turn off the column air purge as needed by reading the column RFID tag.

# **RediSep<sup>®</sup> Alumina**

Single use alumina columns run under normal phase conditions and offer different selectivity to silica. Neutral alumina columns are useful when samples are acid sensitive and prone to degradation on normal phase silica gel.

Choose basic alumina to purify basic compounds without basic modifiers such as TEA or ammonium hydroxide. This avoids solvent swapping, washing the chromatography system, or contaminating subsequent runs.



## Specifications:

- Reusability: Single use
- Particle size: 40–63  $\mu\text{m}$  irregular
- Mesh size: 230–400
- Pore size: 60  $\text{\AA}$
- Surface area  $\text{m}^2/\text{g}$ : 200  $\pm$ 50
- pH: Neutral 7.0  
Basic 9.7  $\pm$ 0.3
- Loading capacity: 0.5–4%

## RediSep Alumina Columns–Neutral

Sample Load		Size	Qty/Pkg Rate	Flow (mL/min)	Catalog #
$\Delta\text{CV}\leq 1$	$\Delta\text{CV}\geq 6$				
40 mg	320 mg	8 g	20	18	69-2203-440
120 mg	960 mg	24 g	20	30	69-2203-441
240 mg	1.92 g	48 g	15	35	69-2203-442
400 mg	3.2 g	80 g	15	40	69-2203-443
800 mg	6.4 g	160 g	12	60	69-2203-446

## RediSep Alumina Columns–Basic

Sample Load		Size	Qty/Pkg Rate	Flow (mL/min)	Catalog #
$\Delta\text{CV}\leq 1$	$\Delta\text{CV}\geq 6$				
40 mg	320 mg	8 g	20	18	69-2203-450
120 mg	960 mg	24 g	20	30	69-2203-451
240 mg	1.92 g	48 g	15	35	69-2203-452
400 mg	3.2 g	80 g	15	40	69-2203-453
800 mg	6.4 g	160 g	12	60	69-2203-456



# RediSep® Solid Load Cartridges

RediSep solid load cartridges improve the resolution of the compound and eliminate reaction byproducts when compared to liquid injection techniques. Prepare pre-filled solid load cartridges by pipetting the dissolved sample onto the top of the cartridge. Prepare empty solid load cartridges by filling the cartridge with a slurry mixture of the dissolved sample and supporting media. For optimal benefits, remove the solvent by vacuum before placing the cartridge on the purification system.

## Empty, Disposable Sample Load Cartridges

Size	Qty	Catalog #
5 g	30	69-3873-235
25 g	30	69-3873-240
65 g	12	69-3873-225
260 g	6	69-3873-201
750 g	4	69-3873-224

## Prepacked Disposable Sample Load Cartridges

Normal Phase Silica		
Size	Qty	Catalog #
2.5 g	20	69-3873-238
5 g	20	69-3873-236
12 g	15	69-3873-243
25 g	15	69-3873-241
32 g	12	69-3873-310
65 g	4	69-3873-226
260 g	4	69-3873-202

## Self-pack Flash Column Frits

Size	Catalog #
Package of 150 frits, 5 gram	60-5237-052
Package of 100 frits, 25 gram	60-5237-053
Package of 75 frits, 65 gram	60-5237-054

## RediSep Bulk Media

Media	Particle	Container Size	Catalog #
Gold Silica	20–40 µm spherical	90 kg	60-2207-419

## Adjustable Solid Load Cartridge Cap (SLCC)

### Size Catalog #

For use with RediSep sample load cartridges.

Fits 2.5 and 5 gram sample load cartridges.

For use on CombiFlash® systems 60-5237-047

Fits 12 and 25 gram sample load cartridges.

For use on all CombiFlash® and Torrent systems 60-5237-048

Fits 32 and 65 gram sample load cartridges.

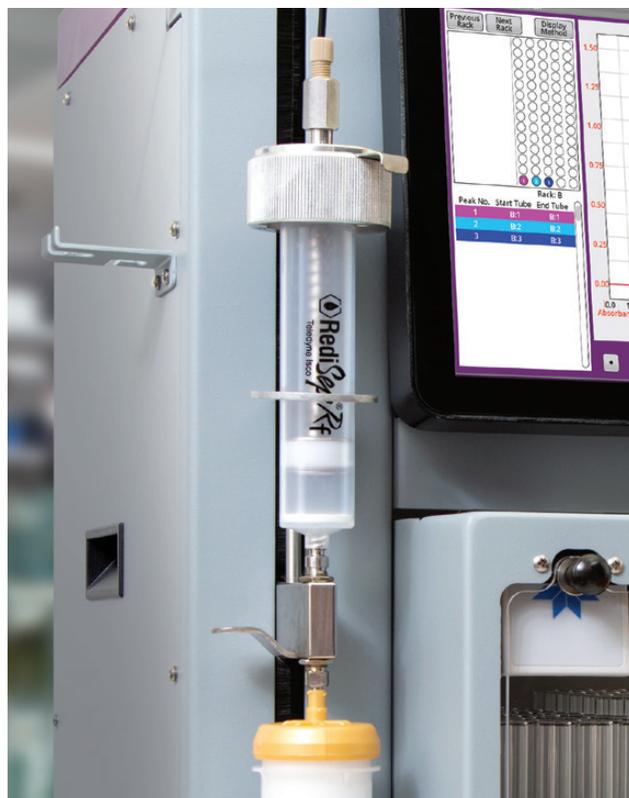
For use on all CombiFlash® and Torrent systems 60-5237-044

Fits 130 and 260 gram sample load cartridges.

For use on CombiFlash® Torrent systems 60-5247-008

Fits 375 and 750 gram sample load cartridges.

For use on CombiFlash® Torrent systems 60-5247-009



Teledyne LABS has an extensive library of application notes, posters, and paper reprints. Some of the most requested documents are listed below. Our full library is available online at [www.teledynelabs.com/documents](http://www.teledynelabs.com/documents)

### Silica

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**AN70**, Higher Resolution Results with RediSep Gold<sup>®</sup> Silica Columns

**Poster Reprint**, Purification of Carbohydrates by MPLC

**Poster Reprint**, Spherical Silica Increases Loading Capacity

### C18

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**AN49**, Improvements in RP MPLC as Alternative to Prep HPLC

**AN51**, RediSep C18 Column—Purification of Peptides

**AN55**, RediSep C18 Column—Purification of Low-solubility Polar Heterocycles

**AN58**, Non-Aqueous Reverse Phase with RediSep Gold<sup>®</sup> C18

### Amine

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**AN31**, RediSep Amine Column—Purification of high pKa Organic Compounds Case Study 1

**AN99**, Use of RediSep Gold<sup>®</sup> Amine Columns in the Weak Ion Exchange Mode

**Poster Reprint**, Advanced Topics RediSep Specialty Media

### C18Aq

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**AN76**, RediSep Gold<sup>®</sup> C18Aq for Highly Aqueous Mobile Phases

**AN95**, Desalting Samples with RediSep Gold<sup>®</sup> C18Aq Columns

**AN97**, Removal of Non-volatile Solvents with RediSep Gold<sup>®</sup> C18Aq Columns

### Solid Load Cartridges

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**AN15**, Dry Samples Improve Resolution in Normal Phase Flash Chromatography

### Detection Techniques

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**AN22**, Expanded Compound Wavelength Detection with UV-Vis

**AN80**, Evaporative Light Scattering Detectors

**AN81**, CombiFlash<sup>®</sup> All-wavelength Collection

**AN90**, Why Use ELSD if My Compound Absorbs UV?

**AN93**, Information Rich Flash Chromatography I Mass Directed Fractionation

**AN94**, Information Rich Flash Chromatography II All-Wavelength Collection and Purity Measurement

**AN102**, Mass-directed Purification of Steroids with APCI and Purlon

### Peptides

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**AN01**, Peptide Separations Using Reverse Phase RediSep Columns

**AN103**, Save Time and Money by Purifying Peptides Yourself

**AN106**, Purification of a Peptide ACE Inhibitor Using the ACCQPrep HP125 or HP150

**AN109**, The Effect of Reverse Phase Chain Length on Peptide Purification

**AN113**, Reverse Phase Column Choice Affects Peptide Purity

**AN115**, Purification of Peptide-Peptoid Hybrids

### General Information

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**AN20**, Acetone as an Alternative to Ethyl Acetate

**TN60**, Use RediSep Columns Everywhere!

**AN 118**, HPLC to Flash

**AN 119** Generate Reverse Phase Flash Focused Gradients at Lightning Speed

**AN 121**, Scaling Up Methods to Larger RediSep Gold<sup>®</sup> Columns.

# RediSep<sup>®</sup> Prep HPLC and SFC Columns

Maximize your Preparative HPLC and SFC performance

When you need the highest purity compound, your first choice should be RediSep Prep columns. RediSep Prep columns are specifically designed for both high-performance preparative liquid chromatography (Prep HPLC) and preparative supercritical fluid chromatography (Prep SFC).

## Maximum purity

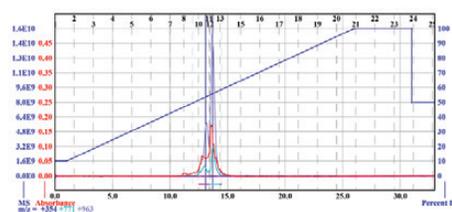
The columns are packed with 5 $\mu$ m particles for maximum purity.

## Easy method development

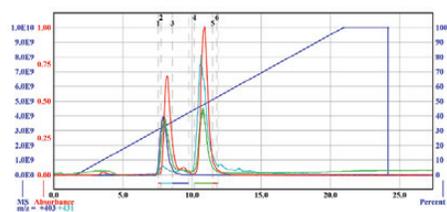
Quickly optimize your method using minimal sample with RediSep Prep HPLC analytical columns.

## Specifications:

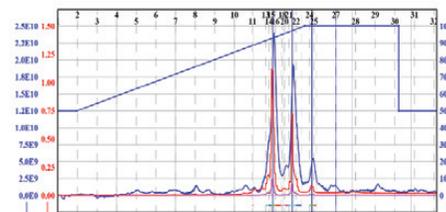
- Particle size: 5  $\mu$ m spherical
- Mesh size: 400–632
- Pore size: 100 Å C18, C18Aq, Silica (200 Å C8)
- Surface area m<sup>2</sup>/g: 300  $\pm$ 50
- Endcapped: Yes (Except silica)
- Carbon: 16.0–18.0% (C18)  
10.0–12.0% (C18Aq)  
4.0–6.0% (C8)
- Loading capacity: 0.1–2%



PEPTIDES



SMALL MOLECULES



NATURAL PRODUCTS

## RediSep Prep HPLC/SFC Columns

Media	Diameter Length	10 mm		20 mm		30 mm		50 mm	
		150 mm	250 mm						
C18, 100Å, 5 $\mu$		69-2203-808	69-2203-809	69-2203-810	69-2203-811	69-2203-812	69-2203-813	69-2203-814	69-2203-815
C18Aq, 100Å, 5 $\mu$		69-2203-816	-	69-2203-818	-	69-2203-820	-	69-2203-822	69-2203-823
C18-WCX, 100Å, 5 $\mu$		-	-	69-2203-876	-	69-2203-877	-	-	-
C8, 200Å, 5 $\mu$		69-2203-857	-	69-2203-858	69-2203-859	69-2203-860	69-2203-861	69-2203-862	69-2203-863
Diamino, 100Å, 5 $\mu$		-	-	69-2203-881	-	69-2203-882	-	-	-
Diol, 100Å, 5 $\mu$		-	-	69-2203-885	-	69-2203-886	-	-	-
4-Ethyl Pyridine, 100Å, 5 $\mu$		-	-	69-2203-870	-	69-2203-871	-	-	-
PEI, 100Å, 5 $\mu$		-	-	69-2203-890	-	69-2203-891	-	-	-
Silica, 100Å, 5 $\mu$		69-2203-824	-	69-2203-826	69-2203-827	69-2203-828	69-2203-829	-	69-2203-831

# RediSep<sup>®</sup> Prep Guard Cartridges

## Protect Your Cartridge Investment

RediSep Prep guard cartridges help to maximize the practical lifetime of your valuable preparative column investment. Over time, the performance of a preparative column declines with the accumulation of impurities and particles onto the inlet frit and the head of the column. An inexpensive guard column prevents these impurities and particles from reaching your valuable prep column. Once you begin to see increased backpressure or changes in chromatography (such as peak broadening or changes in retention times), switch out the guard column to see improved performance.

### RediSep Prep Guard Cartridges

Media	20 mm Catalog #	30 mm Catalog #
C18, 100Å, 10µ	69-2203-874	69-2203-946
C18Aq, 100Å, 10µ	69-2203-875	69-2203-947
C18-WCX, 100Å, 10µ	69-2203-879	-
C8, 200Å, 10µ	69-2203-880	69-2203-945
Diamino, 100Å, 10µ	69-2203-884	-
Diol, 100Å, 10µ	69-2203-888	-
4-Ethyl Pyridine, 100Å, 10µ	69-2203-873	-
PEI, 100Å, 10µ	69-2203-893	-
Silica, 100Å, 10µ	69-2203-894	69-2203-948

### RediSep Prep Guard Hardware

Description	20 mm Catalog #	30 mm Catalog #
RediSep Prep Guard Cartridge Holder (20 or 30 mm) x 10 mm	69-2203-889	69-2203-943
O-ring, PTFE encapsulated for guard holder	69-2203-895	69-2203-944

# RediSep<sup>®</sup> Prep Analytical Columns

## Method Development Columns

Matching analytical HPLC/SFC and UHPLC column media to our RediSep Prep columns allows for method development and column screening on analytical HPLC/SFC or UHPLC systems and method transfer to our RediSep Prep columns on preparative systems like the ACCQPrep HP150, ACCQPrep SFC or even to the CombiFlash NextGen. For more information see our paper: "Overview of Analytical-to-Preparative Liquid Chromatography Method Development."

### Analytical HPLC/SFC Columns (4.6mm X 150 mm)

Media	Catalog #
C18, 100Å, 5µ	69-2203-800
C18Aq, 100Å, 5µ	69-2203-801
C18-WCX, 100Å, 5µ	69-2203-878
C8, 200Å, 5µ	69-2203-856
Diamino, 100Å, 5µ	69-2203-883
Diol, 100Å, 5µ	69-2203-887
4-Ethyl Pyridine, 100Å, 5µ	69-2203-872
PEI, 100Å, 5µ	69-2203-892
Silica, 100Å, 5µ	69-2203-802

### RediSep UHPLC Columns (2mm X 50 mm)

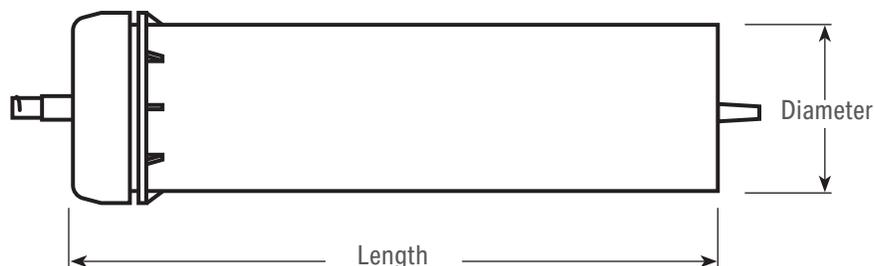
Size	Catalog #
C8, 200 Å, 2.8 µ	69-2203-853
C18, 100 Å, 2.8 µ	69-2203-854
C18Aq, 100 Å, 2.8 µ	69-2203-855

### Reference these Application Notes for more information

**AN 118**, HPLC to Flash

**AN 119** Generate Reverse Phase Flash Focused Gradients at Lightning Speed

# RediSep<sup>®</sup> Column Dimensions



## Column Bed Dimensions

Size grams	Diameter		Length	
	in.	cm	in.	cm
4	0.495	1.257	2.418	6.412
12	0.768	1.950	2.947	7.485
24	0.89	2.260	4.26	10.820
40	1.065	2.705	4.99	12.675
80	1.25	3.175	7.844	19.923
120	1.456	3.698	8.6	21.844
125	2.421	6.149	3.25	8.255
220	2.064	5.243	7.43	18.872
330	2.427	6.165	8.627	21.913
750*	3.016	7.661	12.726	32.324
1500*	4.04	10.262	14.292	36.302
3000*	5.065	12.857	16.250	14.275

## Solid Load Cartridge Bed Dimensions

(Length approximate when filled to stated capacity)

Size grams	Diameter		Length	
	in.	cm	in.	cm
5	0.613	1.557	2.01	5.105
25	1.046	2.657	3.35	8.509
65	1.25	3.175	7.25	18.415
270*	2.42	6.147	7.48	19.000
750*	4.025	10.224	6.33	16.078

\* Inlet and outlet diameters are larger. Generally not directly compatible with competitive systems. See TN60: "Use RediSep Columns Everywhere!" for more details.

# Get the most out of your columns with these Teledyne LABS products

## ACCQPrep® HP150 Preparative HPLC System

- Flow rates from 1 to 150 mL/min allow development of prep methods directly on the system without the need for pump head changes
- Operating pressure up to 6000 psi
- Choice of UV or UV-Vis plus ELSD and MS options



## CombiFlash® EZ Prep Hybrid Flash/Prep System

- Up to 3500 psi (240 bar) and 200 mL/min
- Run Prep HPLC columns up to 50 mm in diameter (including 5 µm particle diameter)
- Flash purification for 10 mg to 33 g followed by final compound purification on Prep HPLC columns
- UV, UV-Vis, ELSD, and MS detection options available
- Automatically switch between normal and reverse phase solvents

## CombiFlash® NextGen Flash Chromatography System

- Driven by intuitive, powerful PeakTrak® software
- Smallest footprint of any automated flash system
- Real time and post run spectral display
- RFID (Radio Frequency Identification) technology for columns and racks
- UV, UV-Vis, ELSD, and MS detection options available



## CombiFlashTorrent® Scale-up Flash Purification System

- Purify 0.5 to 1400 grams in a single run
- Up to 1 liter/minute at 100 psi
- Versatile sample, solvent, fraction, and waste options
- Fully-grounded solvent path for safety
- Easily scale-up methods from CombiFlash or CombiFlash NextGen

## PurIon Mass Spectrometer

- Fractionate on target mass ion(s) or mass range
- Real-time and post-run spectral data display
- Quickly switch between ESI and APCI ionization probes
- Choose the model that meets your needs
  - PurIon S: 50–1200 Dalton range, auto-switching ionization polarity
  - PurIon L: 50–2000 Dalton range, with auto-switching ionization polarity



# Choosing a Column Size

## RediSep® Flash Column Load



Column Size	Easy separation Gold RediSep ( $\Delta CV \geq 6$ ): 20% loading	Easy separation ( $6 > \Delta CV \geq 1$ ): 10% loading	Difficult separation ( $\Delta CV \leq 1$ ): 1% loading
4 g	800 mg	400 mg	40 mg
12 g	2.4 g	1.2 g	120 mg
24 g	4.8 g	2.4 g	240 mg
40 g	8.0 g	4.0 g	400 mg
80 g	16.0 g	8.0 g	800 mg
120 g	24 g	12 g	1.2 g
220 g	44 g	22 g	2.2 g
330 g	66 g	33 g	3.3 g

## RediSep® Prep

### Column Loading and Flow-Rate Guide

Based on 5 $\mu$  particle size columns

ID (mm)	Length (mm)	Grams of Media	Loading Range Reverse Phase	Loading Range Normal Phase	Optimum Flow Rate (mL/min)		Approx. Column Volume (mL)
					HPLC	SFC	
4.6	150	1.5	1.5–15 mg	15–150 mg	1.0	3.0	1.6
10	150	7	7–70 mg	70–100 mg	4.7	14.1	7.7
10	250	12	12–120 mg	120 mg–1.2 g	4.7	14.1	12.8
20	150	28	28–280 mg	280 mg–2.8 g	18.9	56.7	30.6
20	250	47	47–470 mg	470 mg–4.7 g	18.9	56.7	51.1
21.2	150	32	32–320 mg	320 mg–3.2 g	21.2	63.6	34.4
21.2	250	53	53–530 mg	530 mg–5.3 g	21.2	63.6	57.3
30	150	64	64–640 mg	640 mg–6.4 g	42.5	127.5	68.9
30	250	106	106–1060 mg	1.1–11 g	42.5	127.5	114.9
50	150	177	177–1770 mg	1.7–17 g	118.1	354.3	191.4
50	250	295	295–2950 mg	2.9–29 g	118.1	354.3	319.1

Teledyne LABS enhances the visibility for our brands, products, and services, aiding customers in finding solutions that meet their current and future needs. The existing Teledyne brands will remain, providing ongoing value to customers.

