



# RediSep®

CONSUMABLES FOR FLASH AND  
PREPARATIVE CHROMATOGRAPHY



Teledyne ISCO's reliable RediSep Rf preparative chromatography products are designed to consistently produce high purity compounds. You'll enjoy fast, easy purification and scale-up from milligram to hundreds of grams.

### Reliable and Reproducible

RediSep Rf 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<sup>®</sup> and other chromatography systems. RediSep Rf sets the standard in flash chromatography columns.

### Versatile

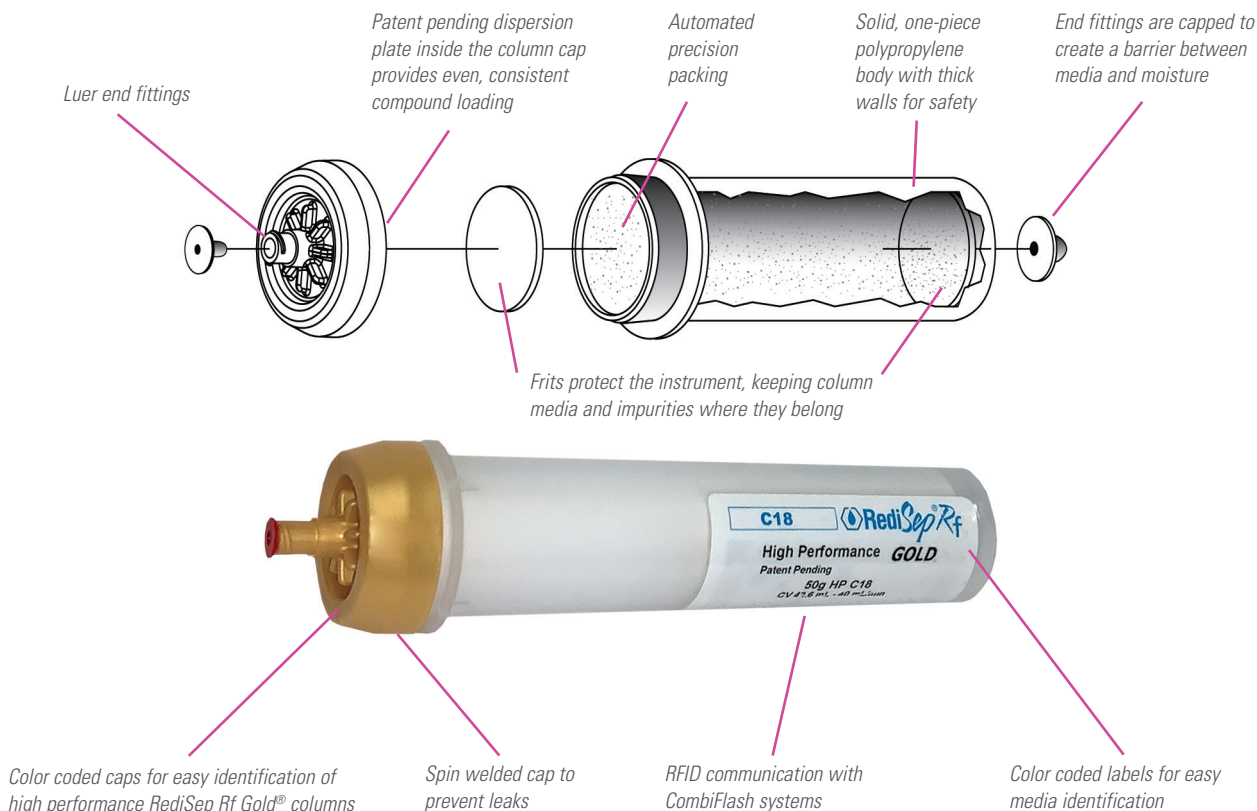
RediSep Rf columns are available in 4 gram up to 3 kg column sizes allowing purification from 10 milligrams up to 300 grams. The enhanced product offering with high performance Gold and a variety of stationary phases expands the utility of RediSep Rf. TLC plates makes method development easy.

### RFID Confidence

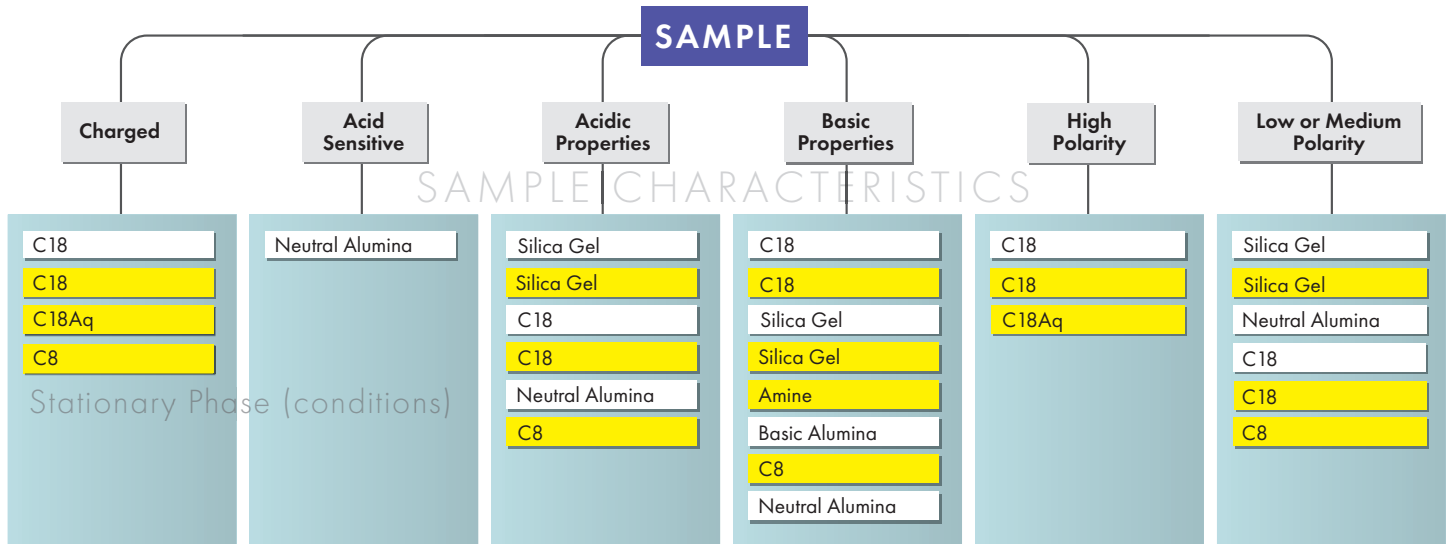
Through RFID technology, the CombiFlash NextGen, EZ Prep, and Torrent<sup>®</sup> systems automatically detect the column type and size and programs a default method optimized for the RediSep column. Method automation reduces setup time and the potential for errors.


### Safe


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



# Column Media Selection Guide

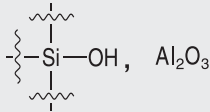
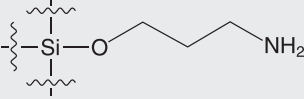
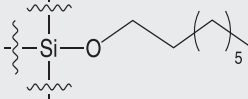
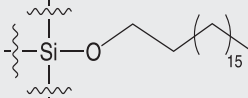


 40–60 µm irregular media RediSep Rf columns.

 20–40 µm spherical media RediSep Rf Gold® high performance columns.

## Stationary Phase Media

Decreasing RediSep Media Polarity

Normal Phase Silica, Alumina	
Amine	
C8	
C18/18Aq	

# RediSep Rf Gold<sup>®</sup>

## High Performance Flash Chromatography

### Resolution with Speed

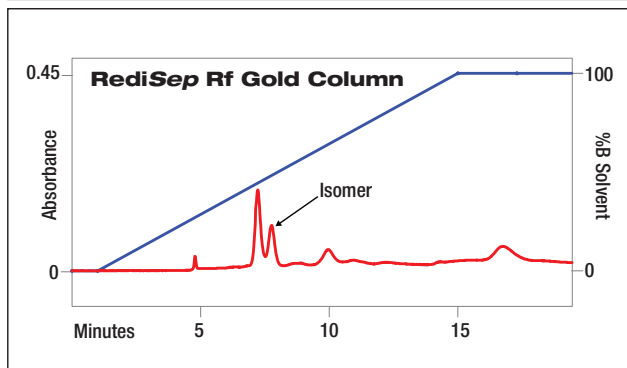
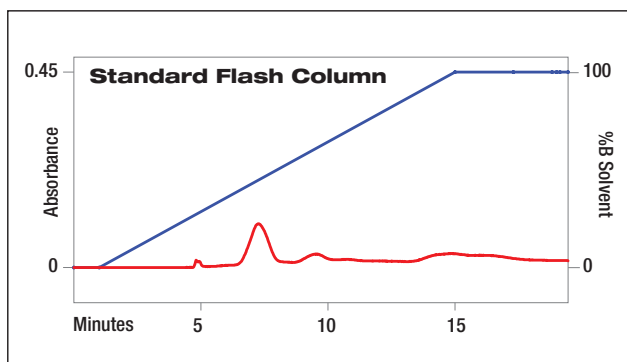
As a pioneer in flash chromatography, Teledyne ISCO continues to bring you the latest innovations to improve your productivity. RediSep Rf Gold high performance flash columns deliver superior sample purity through the use of fine spherical silica gel (20–40  $\mu\text{m}$ ).

RediSep Rf 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, and 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:

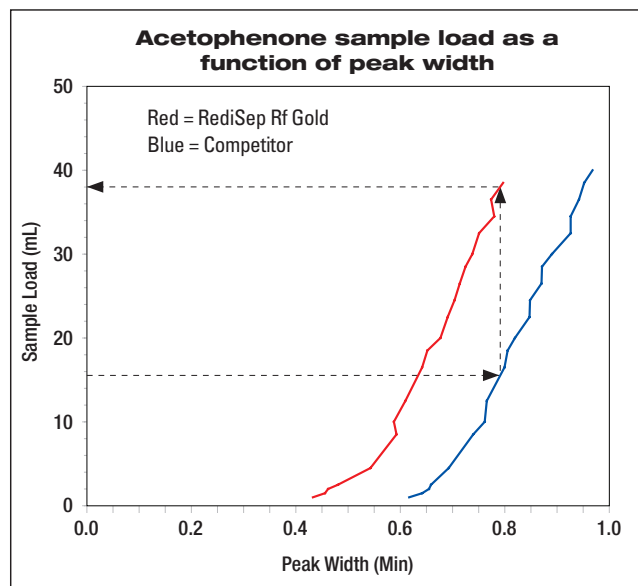
Column size:	40 g
Load:	.333 g (on 5 g cartridge)
Solvents:	Hexane & Ethyl Acetate
Flow rate:	40 mL/min
Run time:	19.4 min

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



## Gold High Load

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



### Run Conditions:

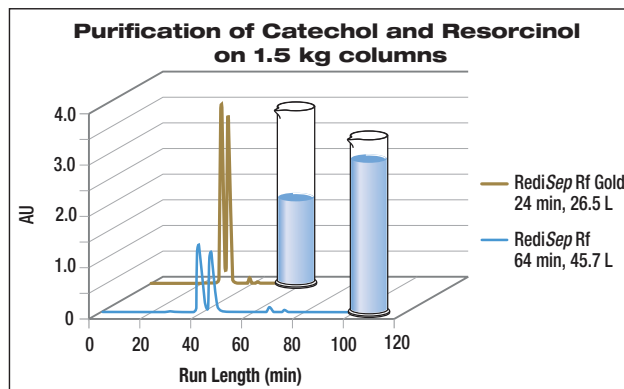
Column size:	12 g RediSep Rf Gold spherical silica column
	12 g competitor's irregular silica column
Loads:	0.02–0.80 g (0.2–7% load)
Solvents:	Hexane & Ethyl Acetate

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

## Gold Speed— $\Delta R_f > 0.1$

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

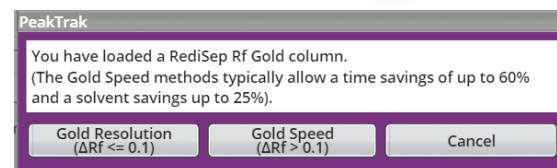
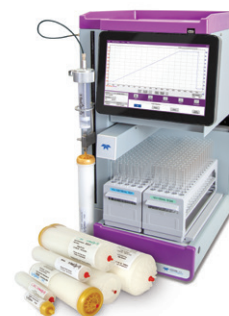
For complete information, see Application Note AN72 at [teledyneisco.com/en-us/chromatography/application-notes](http://teledyneisco.com/en-us/chromatography/application-notes)

## 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 <i>190 mL</i>	1.2 g
24 g	4.8 g <i>270 mL</i>	2.4 g
40 g	8.0 g <i>650 mL</i>	4.0 g
80 g	16.0 g	8.0 g
120 g	24 g <i>1.7 L</i>	12 g
220 g	44 g	22 g
330 g	66 g	33 g

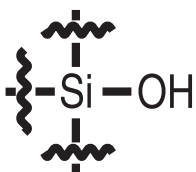
## The RFID Advantage

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



# RediSep® Rf Normal Phase Silica

RediSep Rf disposable, bare silica columns for flash purification of organic compounds are the benchmark for normal phase separations. This high quality media is specified for high resolution and reproducibility for everyday purifications.

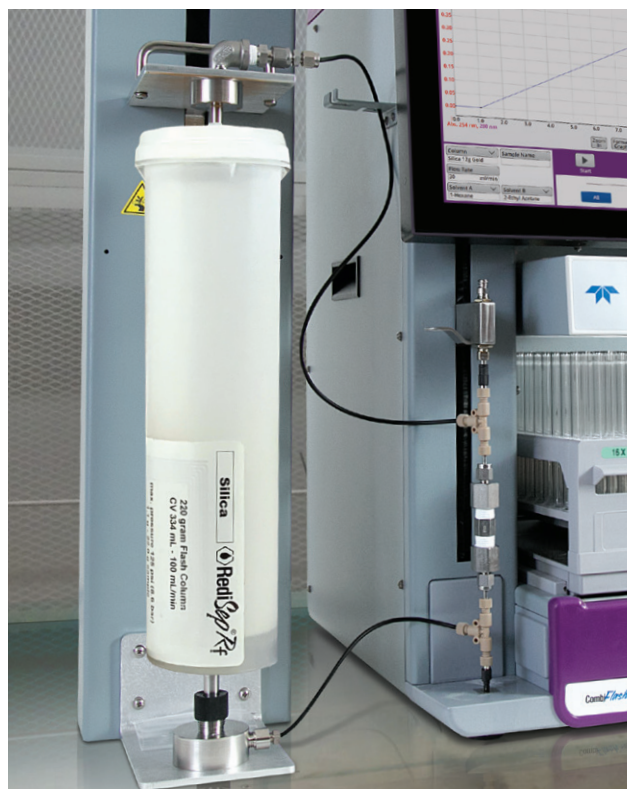


## Specifications:

- 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 Rf Normal Phase Disposable Flash Columns, 40–60 micron

Sample Load		Size	Qty/Pkg	Flow Rate (mL/min)	Catalog #
$\Delta CV \leq 1$	$\Delta CV \geq 6$				
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



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

## Sample Loading— $\Delta R_f$ or $\Delta CV$ ?

This catalog provides sample loading recommendations in  $\Delta CV$  (column volumes). Here's how:

- $\Delta R_f$  values are inversely proportional to the elution time of a component from a column as shown by:

$$CV = 1/R_f$$

- $\Delta CV$  can be determined using the following formula:

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

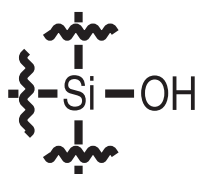
- $\Delta CV$  is a better predictor for cartridge separations

Greater sample loads are possible with easy separations, or those with a  $\Delta CV \geq 6$ . As the  $\Delta CV$  approaches  $\leq 1$ , the separation becomes more difficult, necessitating lesser sample loading on the column or choosing a RediSep Rf Gold high resolution column.

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

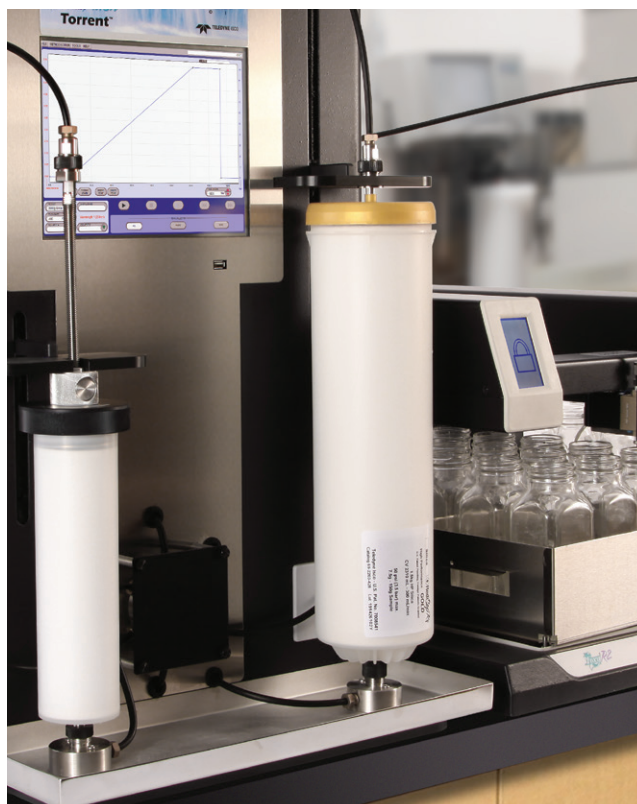


RediSep Rf Gold high performance flash columns deliver superior sample purity through the use of fine spherical silica gel (20–40 µm). RediSep Rf Gold normal phase silica offers the capability to improve resolution and isolate difficult compounds such as isomers and impurities. Alternatively, the improved 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



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

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

Sample Load		Size	Qty/Pkg	Flow Rate (mL/min)	Catalog #
$\Delta CV \leq 1$	$\Delta CV \geq 6$				
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



## Normal Phase TLC Plates

5 x 10 cm, box of 200

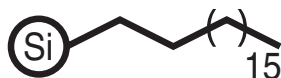


#69-2203-400

# RediSep® Rf Gold C18



RediSep Rf 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 Rf Gold C18 Columns 20–40 micron

Sample Load		Size	Qty/Pkg	Flow Rate (mL/min)	Catalog #
ΔCV≤1	ΔCV≥6				
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



## C18 TLC Plates

Reversed-phase C18 TLC Plates

#69-2203-586

Plates may also be used for RediSep Rf Gold C18 and RediSep Rf Gold C18Aq method development.

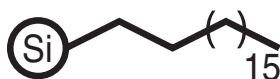




# RediSep Rf Gold® C18Aq



RediSep Rf Gold C18Aq is specifically designed for highly aqueous conditions. Monofunctionalized C18 bonding is interspersed with hydrophilic ligands to prevent phase collapse in high aqueous conditions. RediSep Rf 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 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 µm spherical
- Mesh size: 400–632
- Pore size: 100 Å
- Surface area m<sup>2</sup>/g: 300 ±50
- Carbon content: 11% ±2
- Endcapped: Yes
- Loading capacity: 0.1–2%



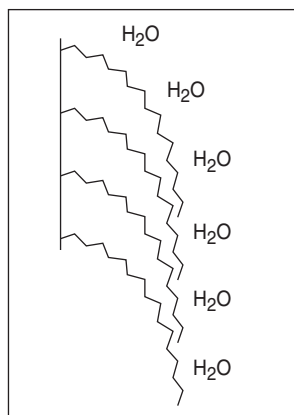
Shown on a CombiFlash NextGen 300+ flash system.

## RediSep Rf Gold C18Aq Columns 20–40 micron

Sample Load		Size	Qty/Pkg	Flow Rate (mL/min)	Catalog #
$\Delta CV \leq 1$	$\Delta CV \geq 6$				
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

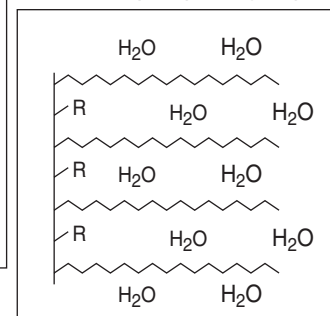
## C18 Silica

Phase Collapse/Dewetting



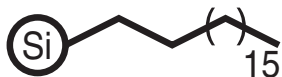
## C18Aq Silica

R= hydrophilic group



# RediSep® Rf C18

RediSep Rf 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 Rf 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 µm irregular
- Mesh size: 230–400
- Pore size: 60 Å
- Surface area m<sup>2</sup>/g: 500 ±50
- Carbon Content: >17%
- Endcapped: Yes
- Loading capacity: 0.1–2%

## RediSep Rf C18 Columns 40–60 micron

Sample Load		Size	Qty/Pkg	Flow Rate (mL/min)	Catalog #
$\Delta CV \leq 1$	$\Delta CV \geq 6$				
4.3 mg	86 mg	4.3 g	2	18	69-2203-410
13 mg	260 mg	13 g	1	30	69-2203-411
26 mg	520 mg	26 g	1	35	69-2203-412
43 mg	860 mg	43 g	1	40	69-2203-413
86 mg	1.72 g	86 g	1	60	69-2203-416
130 mg	2.6 g	130 g	1	85	69-2203-414
240 mg	4.8 g	240 g	1	150	69-2203-418
360 mg	7.2 g	360 g	1	200	69-2203-415
3.3 g	66 g	3.3 kg	1	360	69-2203-530



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

## Storage Instructions for All C8 and C18 Columns

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

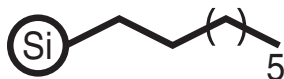
- Never allow the column to dry out after use. Turn off the air purge on instrument.\*
- Remove all organic modifiers by flushing the column with 3 column volumes of 50% methanol or acetonitrile in water.
- Store the column in 70-90% methanol or acetonitrile in water with end caps in place.

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

# RediSep® Rf Gold C8



RediSep Rf 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 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 Rf 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
30 mg	600 mg	30 g	1	35	69-2203-711
50 mg	1.0 g	50 g	1	40	69-2203-712
100 mg	2 g	100 g	1	60	69-2203-713
150 mg	3 g	150 g	1	85	69-2203-714

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

Our 200 angstrom 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 Rf Gold® Amine



RediSep Rf 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 Rf 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
30 mg	600 mg	30 g	1	35	69-2203-506
50 mg	1.0 g	50 g	1	40	69-2203-507
100 mg	2 g	100 g	1	60	69-2203-508
150 mg	3 g	150 g	1	85	69-2203-509
275 mg	5.5 g	275 g	1	150	69-2203-510

## RediSep Gold Amine TLC Plate

5 x 10 cm, box of 50, with F254 indicator

#69-2203-573



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 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® NextGen, EZ Prep, and Torrent will turn off the column air purge as needed by reading the column RFID tag.



# RediSep® Rf 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 µm irregular
- Mesh size: 230–400
- Pore size: 60 Å
- Surface area m<sup>2</sup>/g: 200 ±50
- pH: Neutral 7.0  
Basic 9.7 ±0.3
- Loading capacity: 0.5–4%

## RediSep Rf Alumina Columns

Sample Load		Size	Qty/Pkg	Flow Rate (mL/min)	Neutral	Basic
$\Delta\text{CV} \leq 1$	$\Delta\text{CV} \geq 6$				Cat. # 69-2203-	Cat. # 69-2203-
40 mg	320 mg	8 g	20	18	440	450
120 mg	960 mg	24 g	20	30	441	451
240 mg	1.92 g	48 g	15	35	442	452
400 mg	3.2 g	80 g	15	40	443	453
800 mg	6.4 g	160 g	12	60	446	456



## RediSep Rf Alumina TLC Plates

Basic, 5 x 10 cm, box of 30, with F254 indicator



#69-2203-403

# 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			C18	
Size	Qty	Catalog #	Qty	Catalog #
5 g	20	69-3873-236	5	69-3873-237
12 g	15	69-3873-243	4	69-3873-248
25 g	15	69-3873-241	4	69-3873-242

## Self-pack Flash Column Frits

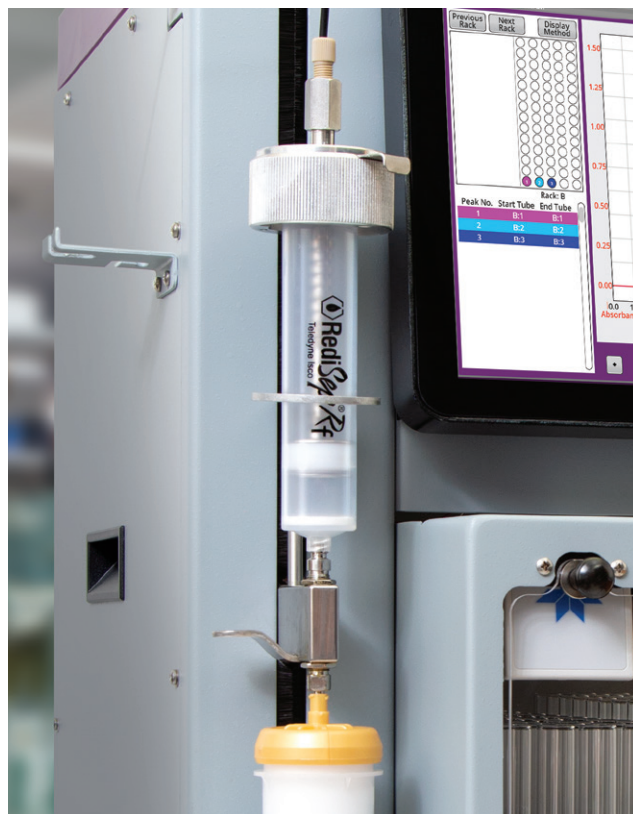
Size	Catalog #
Package of 150 frits, 5 gram	60-5237-052
Package of 100 frits, 25 gram	60-5237-053
Package of 75 frits, 65 gram	60-5237-054

## RediSep Bulk Media

Media	Particle	Container Size	Catalog #
Silica	40–63 µm irregular	950 g	60-5394-478
C18	40–60 µm irregular	25 kg	60-3874-059
C18 Gold	40–60 µm Spherical	25 kg	60-5394-493

## 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





# RediSep® Library

Teledyne ISCO has an extensive library of application notes, posters, and paper reprints. Some of the most requested documents are listed below.

## Silica

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**AN70**, Higher Resolution Results with RediSep Rf Gold® 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® C18

## Amine

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

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

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

## C18Aq

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**AN76**, RediSep Gold® C18Aq for Highly Aqueous Mobile Phases

**AN95**, Desalting Samples with RediSep Gold® C18Aq Columns

**AN97**, Removal of Non-volatile Solvents with RediSep Gold® 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® 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

## General Information

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



Our full library is available online at  
[teledyneisco.com/en-us/chromatography/application-notes](https://teledyneisco.com/en-us/chromatography/application-notes)

# RediSep® Prep HPLC Columns

Maximize your Preparative HPLC performance

When you need the highest purity compound, your first choice should be Teledyne ISCO's RediSep Prep columns. RediSep Prep columns are specifically designed for high performance preparative liquid chromatography (Prep HPLC).

## Maximum purity

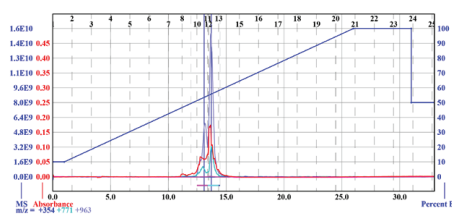
The columns are packed with 5µm particles for maximum purity.

## Easy method development

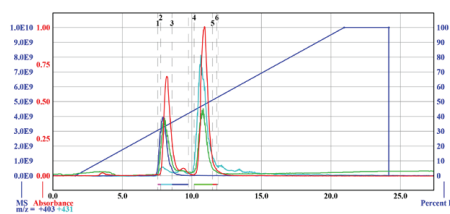
Quickly optimize your method using minimal sample with RediSep Prep HPLC analytical columns.

## Specifications:

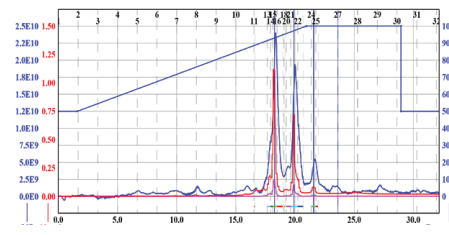
- Particle size: 5 µm spherical
- Mesh size: 400–632
- Pore size: 100 Å C18 (200 Å C8)
- Surface area m<sup>2</sup>/g: 300 ±50
- Endcapped: Yes (Except silica)
- Carbon: 16.0–18.0% (C18)  
10.0–12.0% (C18Aq)  
4.0–6.0% (C8)
- Loading capacity: 0.1–2%



PEPTIDES



SMALL MOLECULES



NATURAL PRODUCTS

## RediSep Prep HPLC Columns (5 µm)

Size	Catalog #				
Length/Diameter (ID)	4.6 mm	10 mm	20 mm	30 mm	50 mm
150 mm, C18, 100 Å	69-2203-800	69-2203-808	69-2203-810	69-2203-812	69-2203-814
150 mm, C18Aq, 100 Å	69-2203-801	69-2203-816	69-2203-818	69-2203-820	69-2203-822
150 mm, C8, 200 Å	69-2203-803	69-2203-832	69-2203-834	69-2203-836	69-2203-838
150 mm, Silica, 100 Å	69-2203-802	69-2203-824	69-2203-826	69-2203-828	69-2203-830
250 mm, C18, 100 Å	--	69-2203-809	69-2203-811	69-2203-813	69-2203-815
250 mm, C18Aq, 100 Å	--	69-2203-817	69-2203-819	69-2203-821	69-2203-823
250 mm, C8, 200 Å	--	69-2203-833	69-2203-835	69-2203-837	69-2203-839
250 mm, Silica, 100 Å	--	69-2203-825	69-2203-827	69-2203-829	69-2203-831



# RediSep® Prep Guard Columns

RediSep Prep Guard columns help to maximize the practical lifetime of your Prep column investment. Over time, the performance of a Prep 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 Columns (5 $\mu$ )

Size	Catalog #
30 mm, Guard C18, 100 Å	69-2203-804
30 mm, Guard C18Aq, 100 Å	69-2203-805

RediSep Prep HPLC and Guard columns use stationary phase with matching selectivity to our RediSep Flash Columns

*The ACCQPrep HP150 HPLC system.*



# RediSep® Prep UPLC Columns

## Method Development Columns

Matching UPLC column media to our Prep columns allows for method development on analytical UPLC systems and method transfer to our RediSep Prep HPLC columns on Preparative HPLC systems like the ACCQPrep HP150. For more information see our paper: Silver, J. "Overview of Analytical-to-Preparative Liquid Chromatography Method Development." ACS Combinatorial Science, 2019 21 (9), 609-613. DOI: 10.1021/acscmbosci.8b00187

## RediSep Prep UPLC Columns (5 $\mu$ )

Size	Catalog #
50 mm, C8, 200 Å, 2.8 $\mu$	69-2203-853
50 mm, C18, 100 Å, 2.8 $\mu$	69-2203-854
50 mm, C18Aq, 100 Å, 2.8 $\mu$	69-2203-855

# RediSep® Column Dimensions



## Column Bed Dimensions

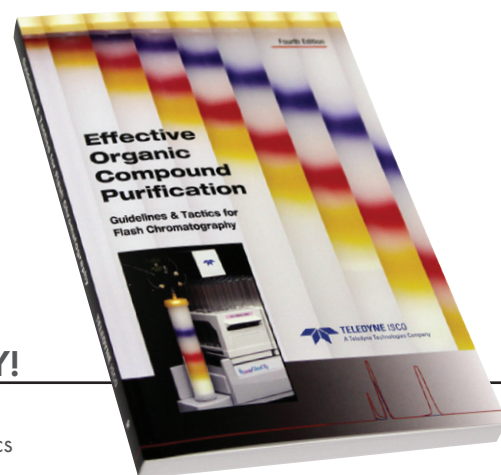
Size grams	Diameter		Length	
	in.	cm	in.	cm
4	0.495	1.257	2.418	6.412
12	0.768	1.950	2.947	7.485
24	0.89	2.260	4.26	10.820
40	1.065	2.705	4.99	12.675
80	1.25	3.175	7.844	19.923
120	1.456	3.698	8.6	21.844
125	2.421	6.149	3.25	8.255
220	2.064	5.243	7.43	18.872
330	2.427	6.165	8.627	21.913
750*	3.016	7.661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

\* Inlet and outlet diameters are larger.  
Generally not compatible with  
competitive systems.

## 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



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# Get the most out of your columns with these Teledyne ISCO 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 technology for columns and racks
- UV, UV-Vis, ELSD, and MS detection options available



## CombiFlashTorrent® Scale-up Flash Purification System

- Purify 0.5 to 300 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 Rf systems

## 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

### Flash Column Load



Column Size	Easy separation Gold RediSep ( $\Delta CV \geq 6$ ): 20% loading	Easy separation ( $\Delta CV \geq 1$ ): 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 HPLC Columns Loading and Flow Rate Guide



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

The recommended maximum pressure for 10 mm and larger diameter RediSep Prep Columns is 3500 psi (240 bar). The maximum pressure is in line with other manufacturers. Generally recommended pressure limits are not found on the suppliers website but are inside the Column Care and Use Guide.

### Teledyne ISCO

P.O. Box 82531, Lincoln, Nebraska, 68501 USA

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