

8.6 kg RediSep Gold® Alternate Media Columns

Use, Cleaning, and Storage Instructions



Chromatography Application Note
P/N 69-2203-917 Rev. A, AN116

Application Overview

Proper sample preparation, care, cleaning, and storage of reusable Teledyne ISCO RediSep Gold high performance C18, C18Aq, and C8 columns will help to extend column life and improve column consistency and reliability.

General Method

Column Equilibration

The column comes preconditioned in a 1:1 mixture of water:methanol. Before your first run or when changing solvent systems, flush the column in manual control with 3 CV of the solvent composition of the method's starting gradient conditions.

For future runs in the same solvent system use the equilibration period built into the default method.

Table 1: Column Data

RediSep Gold High Performance C18 Columns		
Column Media Weight (grams)	Column Volume (mL)	Optimal Flow Rate (mL/min)
5.5	4.6	18
15.5	13.5	30
30	26.4	35
50	42.6	40
100	87.7	60
150	129.7	85
275	243.4	50
415	363.5	150
950	825	200
1900	1650	180
3800	3000	260
8600	7500	360

Sample Loading

The sample load on the column should be 0.1 to 2 percent of the column media weight.

Proper sample preparation is critical to maximizing the lifespan of the column. This means the sample should be free of particulates and well soluble in the loading solvent.

Post-Run Care

With proper care, RediSep Gold C18, C18Aq, and C8 columns may be used thirty times or more. Reversed-phase methods should be written so that at the end of the separation, the column is washed with 2–4 CV of a high percentage (100%) of organic solvent. After 2–4 CV of wash, the percent organic can be returned to the starting condition for 2–3 CV to anticipate the next run column equilibration conditions (see Figure 1). Alternatively, the percent organic can be changed to 20–90% in anticipation of column storage.

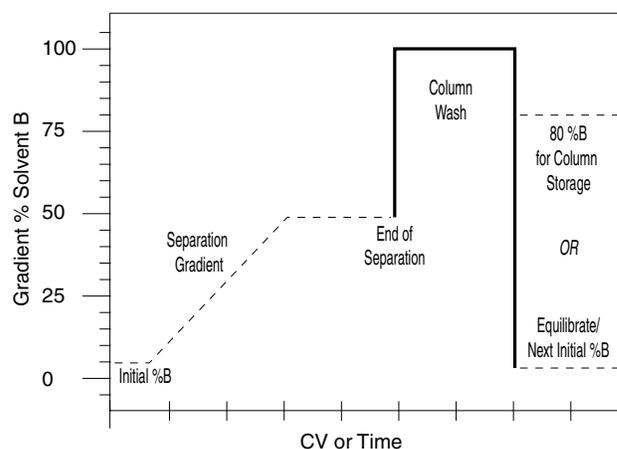


Figure 1. Post run column flushing.

Storage

It is possible to store C18, C18Aq, and C8 columns for long periods with no loss in performance. Following are some general rules for storage for reversed-phase columns:

- *Once wetted, never dry out a reversed-phase column.* This will induce channeling due to expansion and contraction of the stationary phase. The air purge feature (if available on the Flash chromatography system) should be turned off.
- *Store columns wet and well-capped in 10–80% water and 20–90% organic solvent such as acetonitrile, methanol, or ethanol.*
- *Do not store the column under acidic, basic, or buffered conditions, be sure to flush the column and store under the conditions noted above.*

7.0 and 8.6 kg Column Installation Instructions

1. 7.0 and 8.6 kg columns are too large to fit on the Torrent; tubing is supplied to place the column next to the Torrent or on the floor if needed. The column is shipped wet and weights over 55 pounds, so two people should help position the column when unpacking.

2. Remove the black plastic nut from the top of the Torrent's column stand. Then take two wrenches to remove the nut from the adapter (circled in red).



3. Connect the tube connected to the Torrent and the now free nut and ferrule and connect to the Union attached to the pre-swaged tubing.



4. Remove the swaged plug from the top of the column with a wrench and replace with the tubing that is now connected via union to the Torrent.



5. Remove the swaged plug from the bottom of the column with a wrench and replace it with the second piece of tubing that came with the column.



6. Remove the black fitting on the bottom port of the Torrent and connect the tubing from the bottom of the column to this port with the black nut.



7. The column is now ready to be used following the use and care guidelines on the reverse of this page.

Summary

Clean columns with high (100%) organic solvent. Never allow the column to go dry; ensure that the column is capped and stored wet with 20–90% organic solvent.

EAR99 Technology Subject to Restrictions Contained on the Cover Page

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