

RediSep[®] Reversed Phase C-18 Columns

Chromatography Application Note AN2
Instruction Sheet 60-2203-053, Rev C

Use, Cleaning, and Storage

Application Overview

Proper preconditioning, cleaning, and storage of Teledyne Isco reusable RediSep Reversed Phase C-18 Columns will help to extend column life and improve column consistency and reliability.

General Method

Initial Preconditioning

Flush the column with six column volumes (CV) of 1:1 water:acetonitrile prior to immediate use. Alternatively, pump 2CV of 100% acetonitrile through column, then cap and store it for one hour before use. Refer to Table 1 for column volume data.

Sample Loading Capacity

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

Post-run Care

With proper care, RediSep C-18 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 one to two column volumes of a high percentage (100%) of the organic (B) solvent. After 1–2CV of wash, the percent organic can be returned to the starting condition for 2–3CV to anticipate the next run column equilibration conditions (see Figure 1). Alternatively, the percent organic can be changed to 80% in anticipation of column storage.

Storage

It is possible to store C-18 columns for long periods with no loss in performance. Following are some general rules for storage for reversed phase C-18 columns:

- *Once wetted, a reversed phase column should never be dried out.* 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 70–90% organic solvent and 10–30% water.* Acetonitrile, methanol, or ethanol are good organic solvents for this purpose.

Summary

Precondition columns before initial use. Clean columns with high (100%) organic solvent. Never dry the column and store columns wet and capped with 70–90% organic solvent.

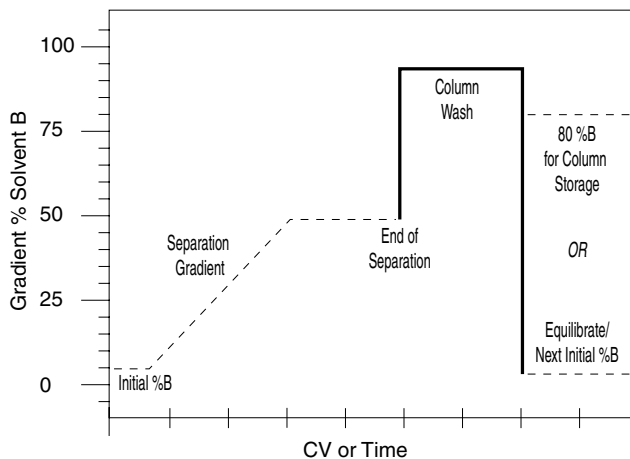


Figure 1: Post Run Column Flushing

Table 1: RediSep C-18 Column Data

Column Media Weight (g)	Column Volume (mL)	Flow Rate (mL/min)	
		Without Pre-packed Cartridge	With Pre-packed Cartridge
4.3	4.1	16	16
13	12.9	20	20
43	42.4	24	24
130	132.6	40	32
360	361.1	56	36

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