

# Adjustable Rf Solid Load Cartridge Cap for RediSep<sup>®</sup> Rf Cartridges

## Product Information and Instructions

### Overview

Teledyne Isco's adjustable Rf solid load cartridge caps are easy to use and provide you with additional flexibility in loading your solid samples.

Three cap sizes are available (refer to Table 1) to fit 5, 25, and 65 gram RediSep Rf empty or prepacked solid load cartridges for use with the CombiFlash<sup>®</sup> Rf system.

### Designed for Convenience

The design of the solid load sample cartridge cap is simple, yet effective.

- **Easily adjustable** – A lever on the cap provides for quick vertical movement of the metal plunger rod, allowing for adjustment to any bed height.
- **No dead volume** – Eliminating dead volume improves gradient accuracy because there is no space for solvent mixing.
- **Secure lock** – The sleeve's internal locking mechanism holds the plunger and cartridge securely in place, without the use of clumsy external springs and locking mechanisms.
- **Low maintenance** – The plunger uses a virgin PTFE seal, eliminating costly, leak-prone O-rings.
- **No leaks** – Internal stops within the cap keep the cartridge from rotating. The sleeve tightly holds the cartridge and prevents leaks, even under high operating pressures.
- **High operating pressure** – The cap, when used according to these instructions, is rated to 200 psi.

### Preparing Cartridges

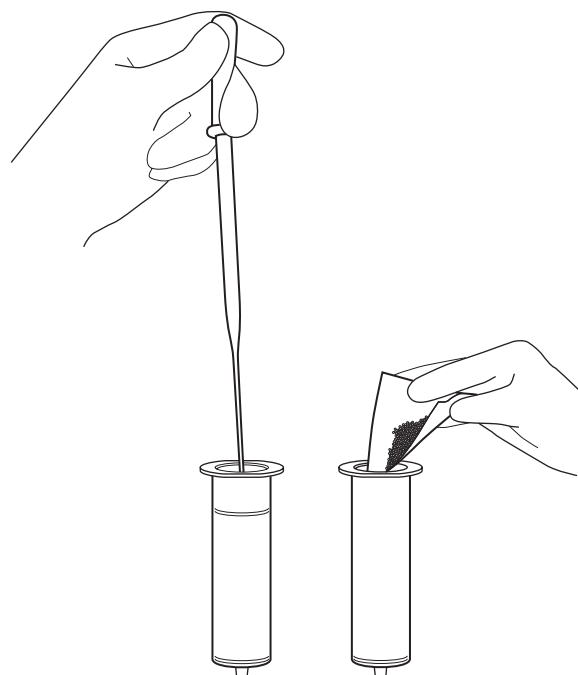
Teledyne Isco's Rf adjustable cartridge cap can be used with any type of sample, and are effective with low solubility samples. The adjustable caps can be used with a variety of RediSep Rf cartridges. To meet your specific needs, RediSep Rf disposable cartridges are available empty, prepacked with silica gel, or prepacked with C18 reversed phase media. After selecting a cartridge, prepare the solid sample.

#### Preparing a Prepacked Cartridge

1. Dissolve the sample and introduce it onto the prepacked cartridge (Figure 1).
2. Remove the solvent by drying the cartridge.

#### Preparing an Empty Cartridge

1. Adsorb the sample onto loose silica or other suitable media.
2. Pour the sample and media mixture into the cartridge (Figure 1).
3. Place a frit into the cartridge.
4. Push the frit down on top of the sample and media mixture.
5. If you did not remove the solvent before loading the mixture into the cartridge, continue with *Drying the Cartridge*.



**Figure 1: Preparing Cartridges** Pipette sample onto prepacked cartridges (left) or pour adsorbed sample into empty cartridges (right).

#### Drying the Cartridge

Solvent should be removed from the prepared cartridge. You can do so using a vacuum dryer or the air pump in the CombiFlash Rf system. Instructions to use the system's air pump are included in the next sections, *Loading Cartridges*.

## Loading 5 and 25 gram Cartridges

To load the 5 or 25 gram cartridge on the system:

1. The solid load cartridge cap must match the size of your selected cartridge. If it does not match, install the correct cap now.
2. Press the lever on the side of the cap and fully extend the plunger (Figure 2).
3. Slide the plunger into the cartridge until it reaches the top frit (Figure 3).
4. Press the lever and push the cartridge into the cap. Align the cartridge so that it fits fully into the recess in the cap (Figure 4).

5. Slide the sleeve over the cartridge and turn it  $\frac{1}{4}$  turn counterclockwise to secure all components (Figure 5).

### CAUTION

Operating the cartridges at pressures greater than 50 psi may cause leaks. To extend the operating pressure range to 200 psi, always use a sleeve and correct cap with the 5 and 25 gram RediSep Rf cartridge.

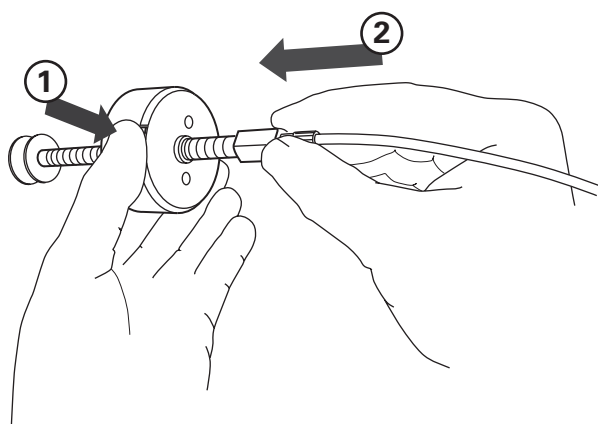


Figure 2: Press the lever and extend the plunger

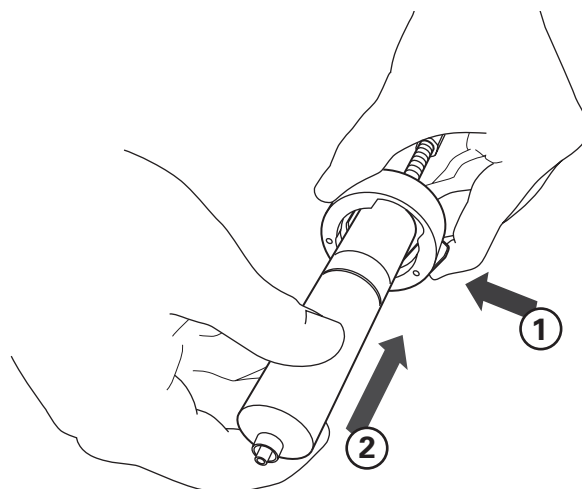


Figure 4: Align and push cartridge into the cap

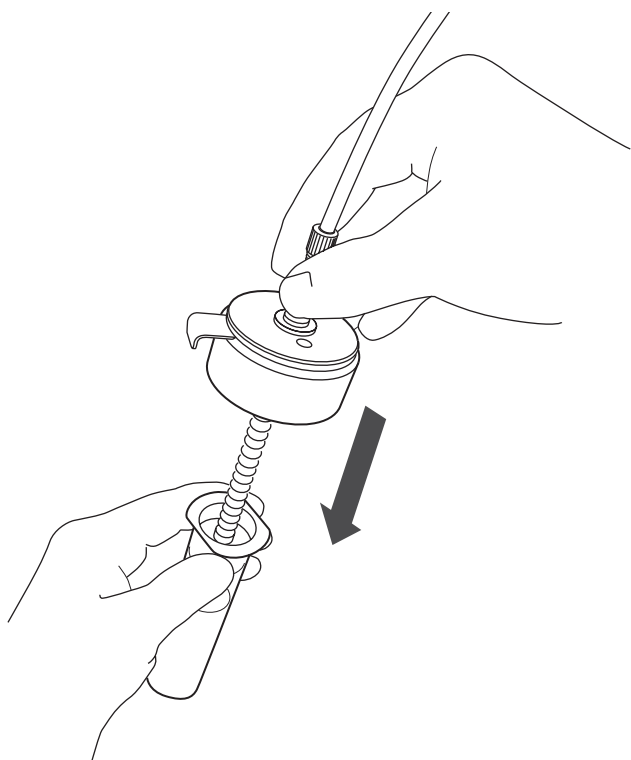


Figure 3: Insert the plunger to the bed

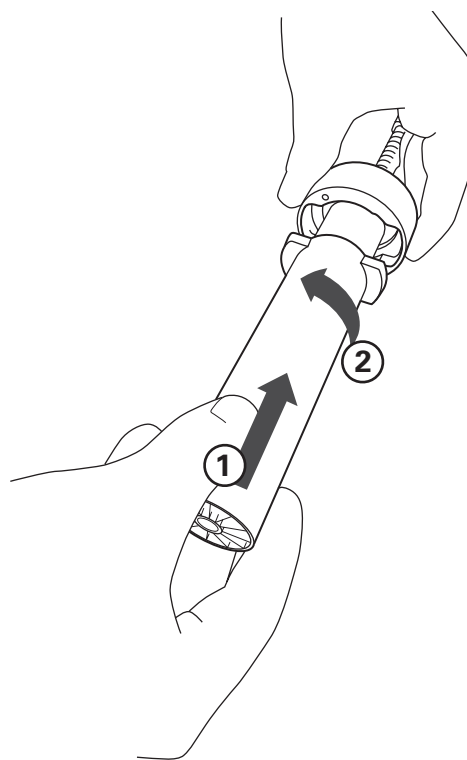
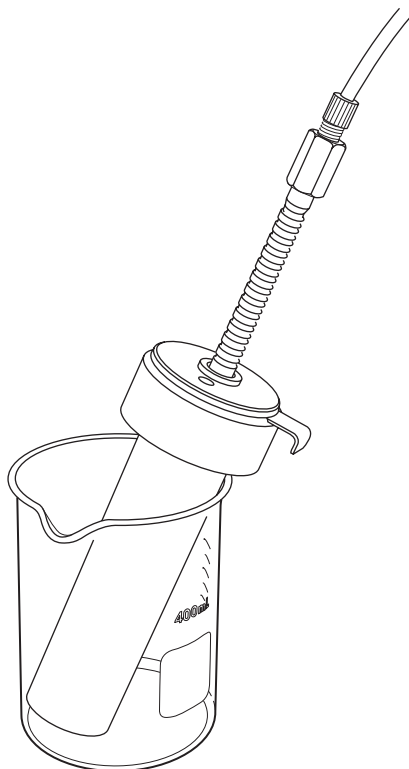
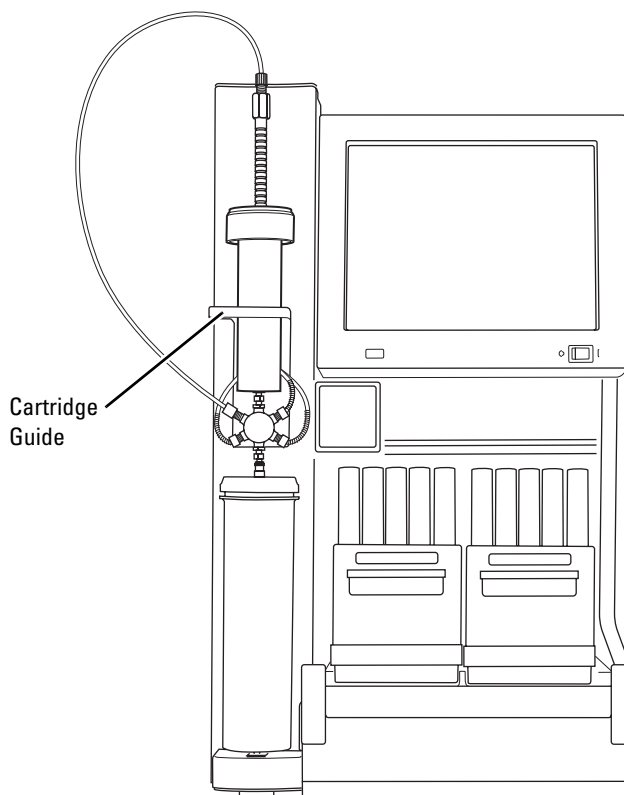


Figure 5: Insert the sleeve and lock into place

6. **Optional** – If the cartridge still contains solvent, use the CombiFlash Rf to remove the solvent. To do so using the internal air pump:
  - a. Place the end of the cartridge in a beaker to capture solvent and any compound that “breaks through” (Figure 6).
  - b. On the CombiFlash Rf touch screen panel, select the Tools>Manual Control menu option. This opens the Manual Control window.
  - c. Click the Air Purge Solid Sample button. Allow the air pump to run until the solvent is removed. The drying time can range from 10 minutes for hexane to 30–45 minutes for methanol.
7. Insert the cartridge assembly through the cartridge guide and secure it to the Luer fitting (Figure 7).



**Figure 6: Dry the sample using the internal air pump** (Optional)



**Figure 7: Secure the cartridge assembly on the CombiFlash Rf system**

## Loading 65 gram Cartridges

To load the 65 gram cartridge on the system:

1. If the system does not have a 65 gram solid load cartridge cap, install it now.
2. Insert the plunger into the cartridge body.
3. Press the lever on the side of the cap and adjust the plunger to the bed height.
4. Firmly insert the cartridge into the cap.
5. Turn the cartridge  $\frac{1}{4}$  turn counterclockwise to secure it in the cap.
6. **Optional** – If the cartridge still contains solvent, use the CombiFlash Rf to remove the solvent. To do so using the internal air pump:
  - a. Place the end of the cartridge in a beaker to capture solvent and any compound that “breaks through” (Figure 6).
  - b. On the CombiFlash Rf touch screen panel, select the Tools>Manual Control menu option. This opens the Manual Control window.
  - c. Click the Air Purge Solid Sample button. Allow the air pump to run until the solvent is removed. The drying time can range from 10 minutes for hexane to 30–45 minutes for methanol.
7. Insert the cartridge assembly through the cartridge guide and secure it to the Luer fitting (Figure 7).

## Ordering Information

Table 1 lists catalog numbers for ordering the Rf solid load cartridge caps, disposable cartridges, and sleeves.

To place your order, contact your Teledyne Isco representative. Or, contact the factory using the information below.

<b>Table 1: Teledyne Isco Catalog Numbers</b>	
<b>Solid Load Cartridge Caps</b>	
60-5237-036	CombiFlash Rf adjustable solid load cartridge cap (SLCC), fits 5 gram sample load cartridges
60-5237-037	CombiFlash Rf adjustable SLCC, fits 25 gram sample load cartridges
60-5237-044	CombiFlash Rf adjustable SLCC, fits 65 gram sample load cartridges
<b>Empty Cartridges</b>	
69-3873-217	Sample load, empty cartridge (holds up to 5 grams) package of 30
69-3873-220	Sample load, empty cartridge (holds up to 25 grams) package of 30
69-3873-225	Sample load, empty cartridge (holds up to 65 grams) package of 12
<b>Prepacked Silica Cartridges</b>	
69-3873-219	Sample load, prepacked silica gel cartridges, 5 grams, package of 20
69-3873-221	Sample load, prepacked silica gel cartridges, 25 grams, package of 15
69-3873-226	Sample load, prepacked silica gel cartridges, 65 grams, package of 12
<b>Prepacked C18 Reversed Phase Cartridges</b>	
69-3873-304	Sample load, prepacked C18 cartridges, 5 gram, package of 5
69-3873-305	Sample load, prepacked C18 cartridges, 25 gram, package of 4
<b>Replacement Sleeves</b>	
60-5237-042	Sleeve for 5 gram CombiFlash Rf adjustable SLCC, package of 4
60-5237-043	Sleeve for 25 gram CombiFlash Rf adjustable SLCC, package of 4

*Teledyne Isco is continually improving its products and reserves the right to change product specifications, replacement parts, schematics, and instructions without notice.*

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