

CARE AND USE OF MAGNETIC DISC DROP DISPENSER VP 779-5A

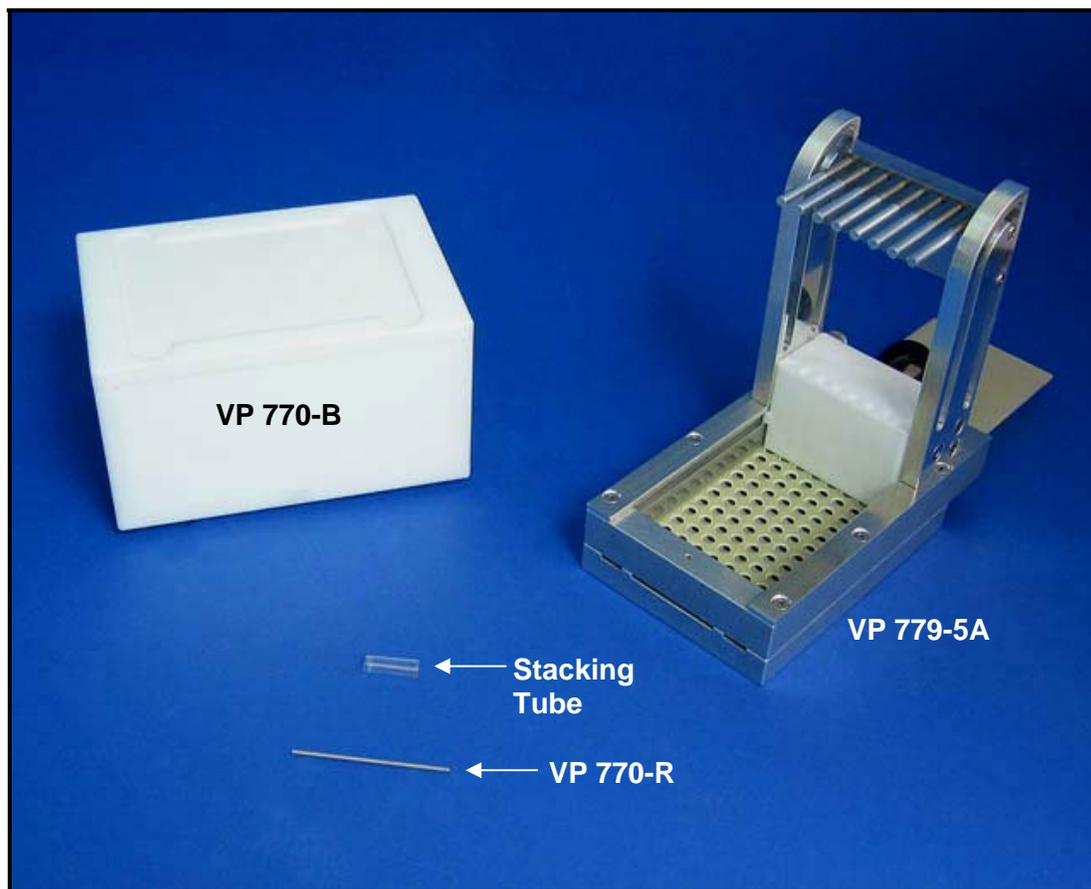


Figure 1. Disc Dispenser System for PTFE Sandwich-style Stir Discs VP 772FN-5-5 (5 mm diameter, parylene coated Neodymium Iron Boron discs).

Magnetic Disc Drop Dispenser System is composed of the following parts:

VP 779-5A: Drop dispenser for VP 772FN-5-5 PTFE Sandwich-style Stir Discs

VP 770-B: Magnetic Block with Microplate Place-Holder etched into top

Caution: The Magnetic Block contains a VERY STRONG MAGNET!!!

VP 770-R: Magnetic Stir Element Retriever

Magnetic Disc Stacking Tube

Notes on using PTFE Sandwich-style Stir Discs

1. When separating discs from each other, slide them apart as opposed to pulling. Since this Stir Element is composed of 2 Neodymium discs sandwiched around a pocketed piece of PTFE, each disc will want to interact with the disc of the next Stir Element in the stack. So care needs to be taken to ensure that 2 discs of a particular Stir Element do not come apart.
2. Once the discs are in the plate take care to not jar the plate or pass it too close the VP 770-B Magnetic Block or else the discs may be pulled out of the plate.

Preparation of discs for loading into Dispenser

1. Place an empty 96 well plate on top of VP 770-B Magnetic Block in the plate locator etched into plastic cover.
2. Remove VP 772FN-5-5 Magnetic Discs from bags and arrange in stacks of twelve. Use the small plastic tube to measure 12 discs in a stack. Fill the tube to the top to count 12 discs (see Figure 2a). Note: When separating discs from each other, slide them apart as opposed to pulling.
3. Determine the magnetic orientation of the VP 772FN-5-5 Magnetic Disc stacks relative to the VP 770-B Magnetic Block by holding each stack loosely in hand over the block (see Figure 2b).
4. Place the stacks into the plate on top of the VP 770-B Magnetic Block such that they are spaced far enough apart to prevent interaction (see Figure 2b). Prepare 8 stacks for each 96 well plate.

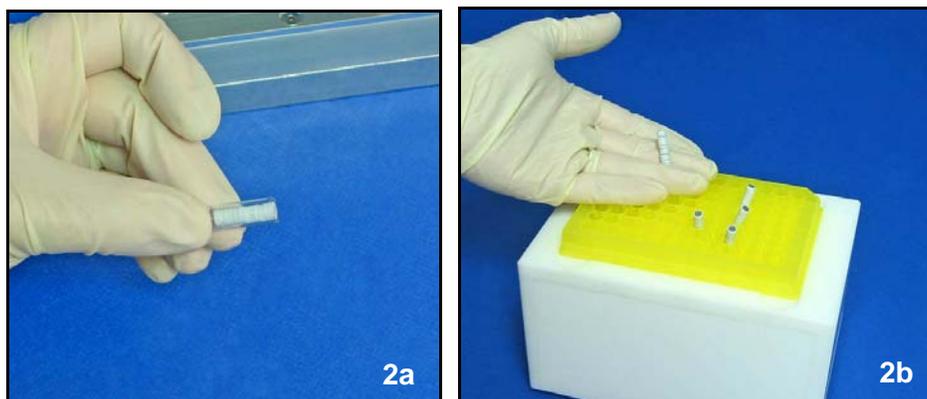


Figure 2. (a) Measure 12 discs in a stack. (b) Determine magnetic orientation of stacks and place into plate on magnetic block

Loading discs into Dispenser Tray

1. Move the Loading Jig of the dispenser into the loading position as shown in Figure 3. The retaining lid now is hanging past the edge of the body of the dispenser.
2. Secure the Loading Jig in this position using the latch as shown in Figure 3a. This prevents the Jig from moving while the discs are being loading.

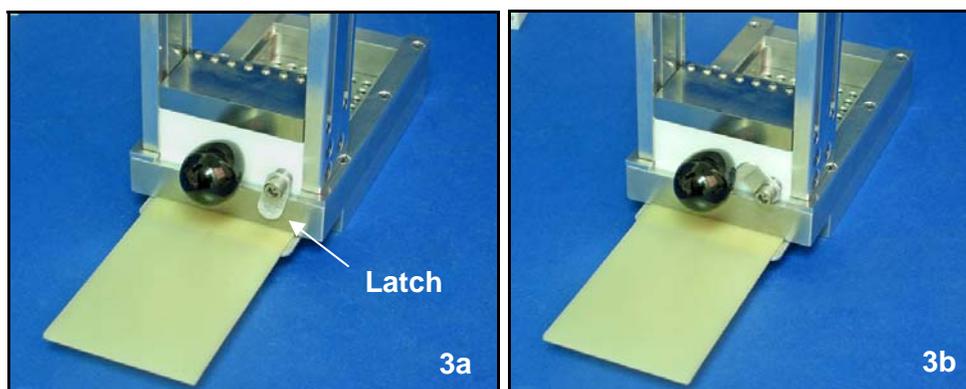


Figure 3. (a) Secure the Loading Jig to the end of the Dispenser using the latch. (b) Release the Loading Jig latch

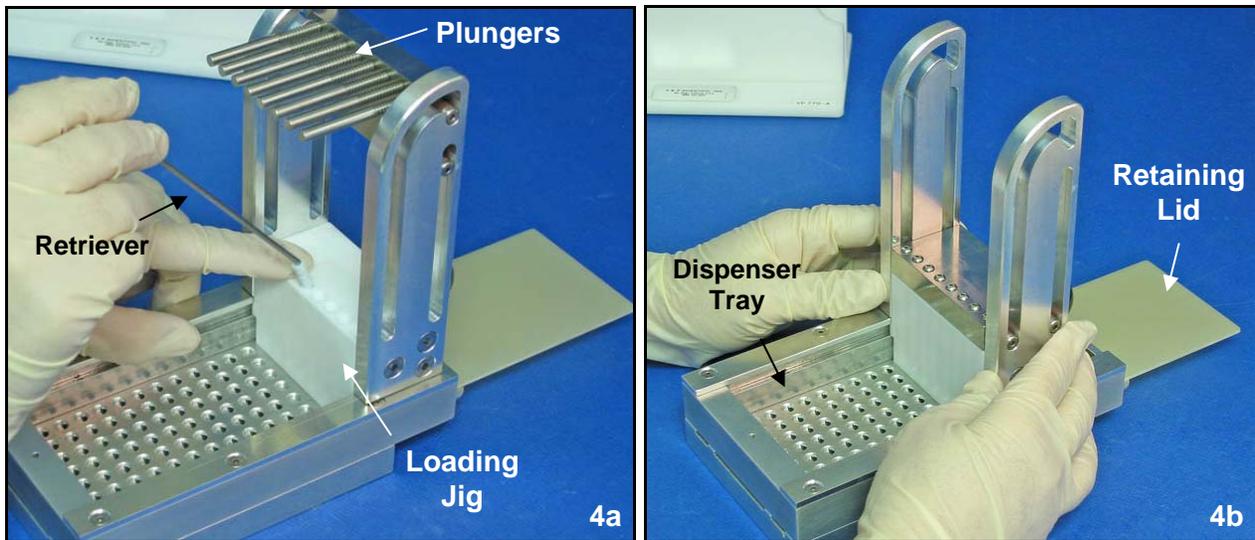


Figure 4. (a) Loading the Loading Jig and then (b) filling the holes in the Dispenser Tray with discs.

3. Remove the Spring-Loaded Plungers from the Loading Jig by sliding the metal block that holds them up and back as shown in Figure 4a.
4. Use the VP 770-R Magnetic Stir Element Retriever to pick up and place a stack of 12 VP 772FN-5-5 magnetic discs into loading position A of the Loading Jig. With finger from other hand cover previously positioned stack so that it is not drawn out of Jig by next stack of magnetic discs. Repeat for positions B, C, D, E, F, G and H.

Dispensing discs into plate

1. Place the spring-loaded Plunger System into all 8 of the loading positions and make sure springs are fully engaged by pressing on the top of each spring assembly (see Figure 4b).
2. Place the Loading Jig latch in the “up” position as shown in Figure 3b.
3. Grasp the Loading Jig with both hands (or use black push knob on back) and slowly advance across the 96-hole Dispenser Tray (see Figure 4b). As the Loading Jig passes each row of holes a disc from each stack is pushed into the hole by the force of a spring-loaded Plunger. Make sure that after each movement all of the Plungers have dropped down one notch. The retaining lid holds the discs in place until they are dispensed.
4. When the last row of holes is filled, place a microplate under the dispenser.
5. Being careful to not press the sliding Top Plate of Dispensing Tray, place the loaded Dispenser and plate on top of the Magnetic Block Holder.
6. **HAVING THE DISPENSER ON TOP OF THE MAGNETIC BLOCK IS VERY IMPORTANT TO DEPOSITING THE DISCS IN THE WELLS.**
7. Push the sliding Top Plate of Dispensing Tray to align it with the Bottom Plate of Dispensing Tray to allow the magnetic discs to drop into the microplate wells (see Figure 5a).

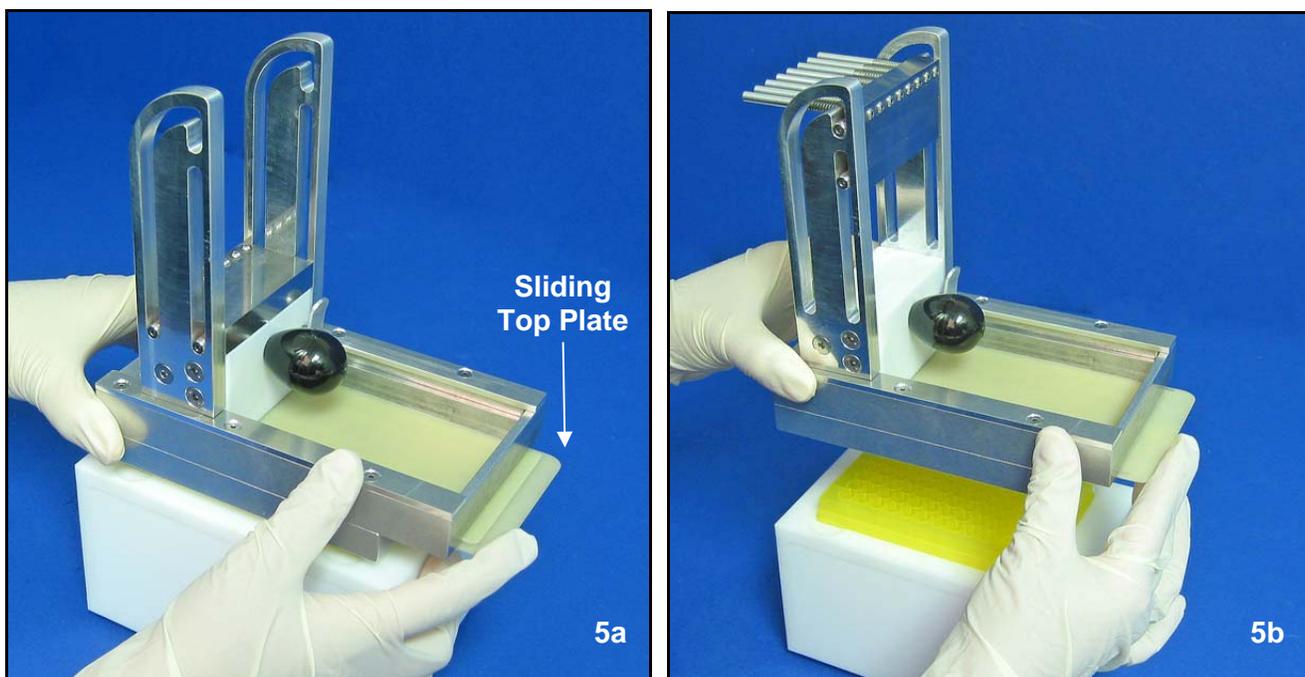


Figure 5. (a) Depositing discs into wells of plate. (b) Lifting Dispenser off the microplate containing discs while microplate is still resting on Magnetic Block Holder.

8. Remove the spring-loaded Plungers from the Loading Jig by sliding the metal block that holds them up and back as shown in Figure 5b. Lift the dispenser off the microplate, leaving the plate in place on top of the VP 770-b Magnetic Block Holder.
9. **THE FOLLOWING IS VERY IMPORTANT TO KEEPING THE DISCS IN THE WELLS:**
Place a lid on the microplate before removing plate from the Magnetic Block Holder.
10. Lift the microplate **STRAIGHT UP** and off the Magnetic Block Holder:
11. Visually ensure that there is only 1 disc per well.
12. Microplate is ready to use to mix the contents of the wells on a V&P Alligator Tumble Stirrer.

Recovering magnetic discs for re-use

1. Put a lid on microplate and hold the VP 770-B Magnetic Block on top of the lid. Raise the Magnetic Block straight up and the magnetic discs and lid will be attached to it. Turn the VP 770-B upside down and remove the lid with the discs from the Magnetic Block. Recover and wash the discs for re-use.
2. Clean the magnetic discs using detergents and solvents appropriate to application in use. If the discs have collected ferrous metal particles this is easily removed using sticky tape.
3. The Dispenser can be cleaned by wiping with alcohol.