

CARE AND USE OF DROP DISPENSER FOR TUMBLE STIR ELEMENTS

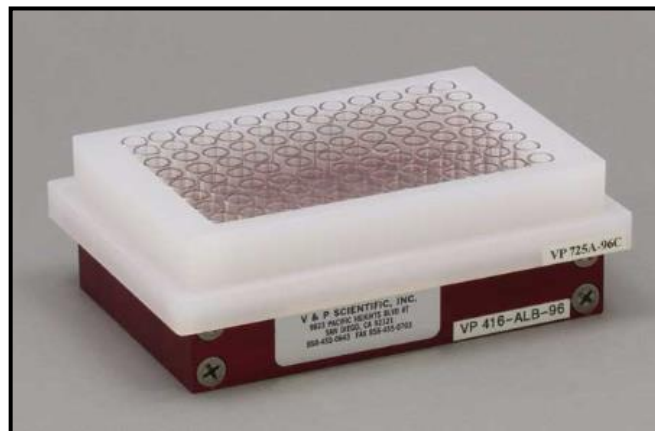


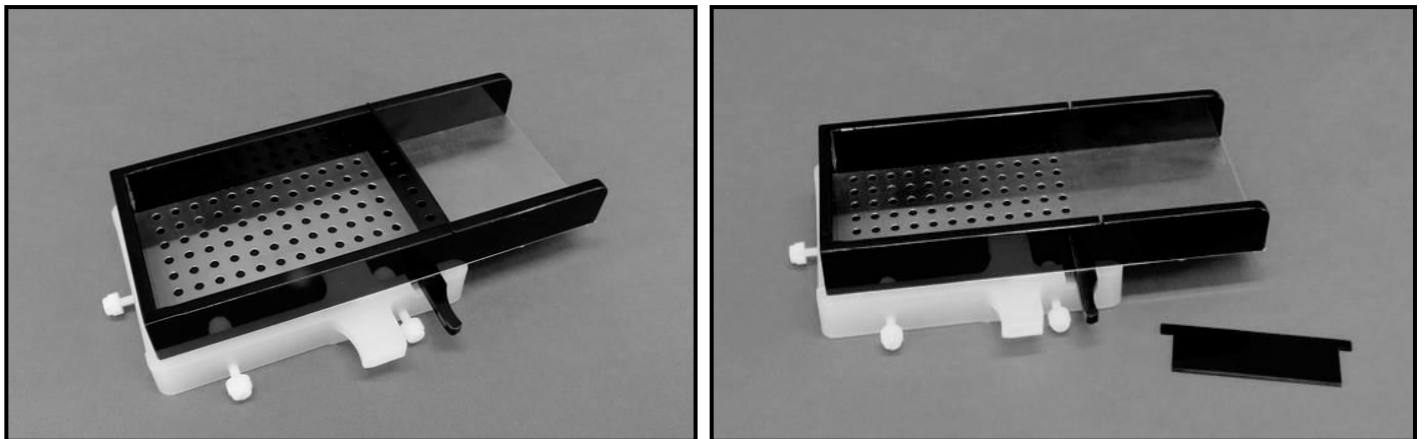
On left, VP 721A-96-1 Drop Dispenser for loading VP 721F and VP 721F-1 Tumble Stir Discs into microplates. On right, VP 719A-AS-1 Drop Dispenser for loading VP 719F and VP 719F-1 Tumble Stir Discs into glass vial reaction blocks or racks that have SLAS dimensions at top of block or rack (see top photo for example of vial rack).

Drop Dispensers allow demagnetized Stainless Steel Stir Elements to be loaded into empty or liquid-containing microplates (on left above) or reaction blocks with glass vials (on right above). These dispensers contain arrays of holes (24, 48, 96, or 384) in a thin top plate that are large enough to accommodate just one stir element. Below this top plate is another plate with identical holes, but this plate is off-set so that it prevents the stir element from falling through. Filling the dispenser holes and moving the bottom slider plate drops the stir element into microplate wells or glass vials. The Drop Dispensers allow loading a microplate or glass vials that already contain liquid. The "A" Series Drop dispensers are made from plastic material and cannot be sterilized by autoclaving, but they can be disinfected with bleach or alcohol. See a list of options in the table below.

Drop Dispenser	Format	Stir Element Series	Use with:
VP 711A-24-AS-1	24	VP 711D	Reaction Block: Analytical Sales, VP 416-ALB-24
VP 711A-96-1	96	VP 711D	Microplate*
VP 711A-96-AS-1	96	VP 711D	Reaction Block: Analytical Sales, VP 416-ALB-96, VP 416-ALE-96
VP 712A-96-1	96	VP 712	Microplate and Reaction Block*
VP 716A-96-1	96	VP 716	Microplate*
VP 716A-96-AS-1	96	VP 716	Reaction Block: Analytical Sales, VP 416-ALB-96, VP 416-ALE-96
VP 719A-24-AS-1	24	VP 719	Reaction Block: Analytical Sales, VP 416-ALB-24
VP 721A-48-AS-1	48	VP 721	Reaction Block: Analytical Sales, VP 416-ALB-48
VP 721A-96-1	96	VP 721	Microplate*
VP 721A-96-AS-1	96	VP 721	Reaction Block: Analytical Sales, VP 416-ALB-96, VP 416-ALE-96
VP 724A-384-1	384	VP 724	Microplate
VP 725A-384-1	384	VP 725	Microplate
VP 725A-96-1	96	VP 725	Microplate*
VP 725EA-96-1	96	VP 725E	Microplate*
VP 725GA-96-1	96	VP 725G, VP 725H	Microplate*

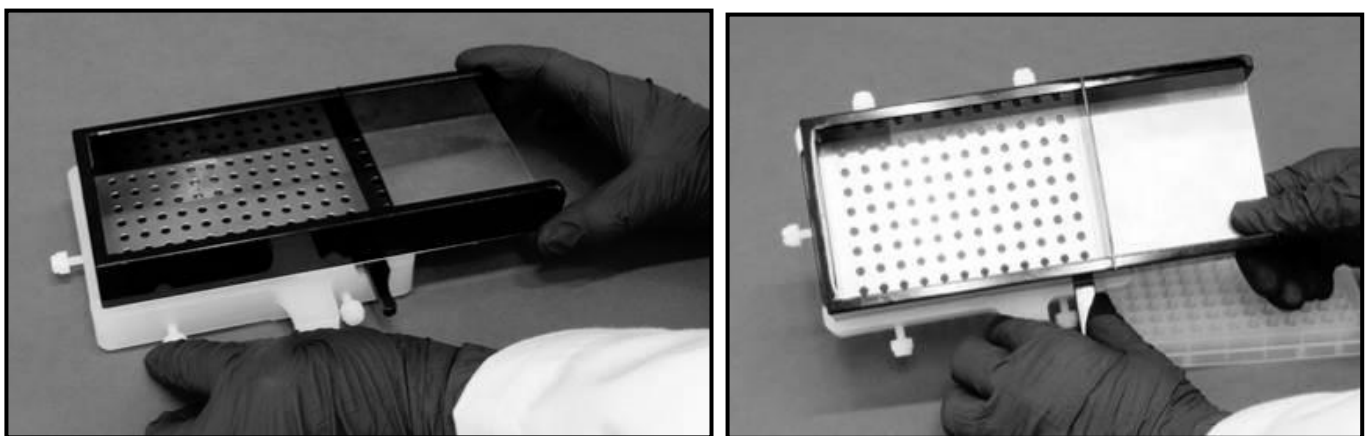
*Microplate Dispensers that can be used with Reaction Blocks (Analytical Sales, VP 416-ALB-96, VP 416-ALE-96) require an adapter collar VP 725A-96C (see below).





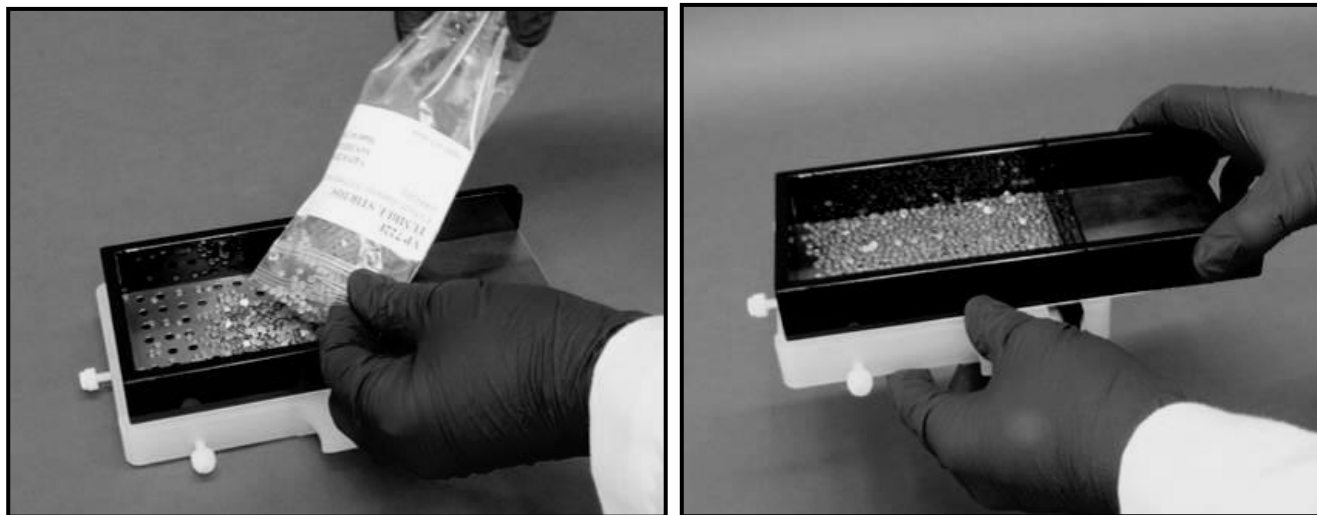
VP 721A-96-1 Drop Dispenser for VP 721F Tumble Stir Discs, shown with and without the retaining piece in position.

1. Disinfect the Drop Dispenser by briefly soaking in a 10% bleach solution followed by sterile water rinses and a final rinse in alcohol.
2. Sterilize Tumble Stir Elements (Discs, Bars or Dowels) by autoclaving or heating in a hot air oven at 150°C for 1 hour.
3. Using the thumbscrews on the Drop Dispenser, adjust the alignment of the Dispenser to the top of the microplate to which the Tumble Stir Elements will be dispensed. For alignment to a reaction block with vials an alignment collar needs to be used (ask V&P Scientific for assistance). While pulling the Dispenser's plastic trigger, visually check that the holes of the Dispenser line up with the wells of the microplate by looking straight down on the Dispenser as it is resting on the microplate. Do not over tighten the thumbscrews, the Dispenser should be loose enough to easily lift off the microplate.



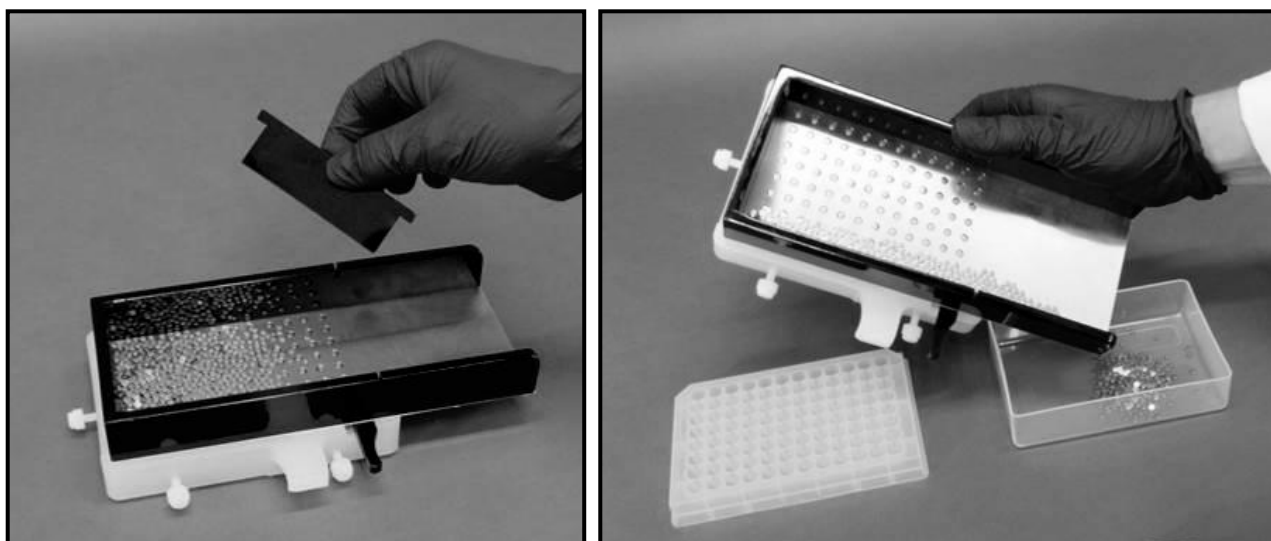
Adjusting thumbscrews to fit Drop Dispenser over microplate (left). Pulling lever to align top and lower sliding plates to check holes (right).

4. Make sure the “retaining piece” is in place before loading the Tumble Stir Elements. Carefully pour about five times the needed number of Tumble Stir Elements into the Drop Dispenser. Gently swirl while holding the Dispenser level to fill the holes with Stir Elements. The Dispenser does not need to be on the microplate during this step.



Pouring excess Stir Elements into Dispenser (left). Shaking Dispenser to move Stir Elements around so they drop into the holes (right).

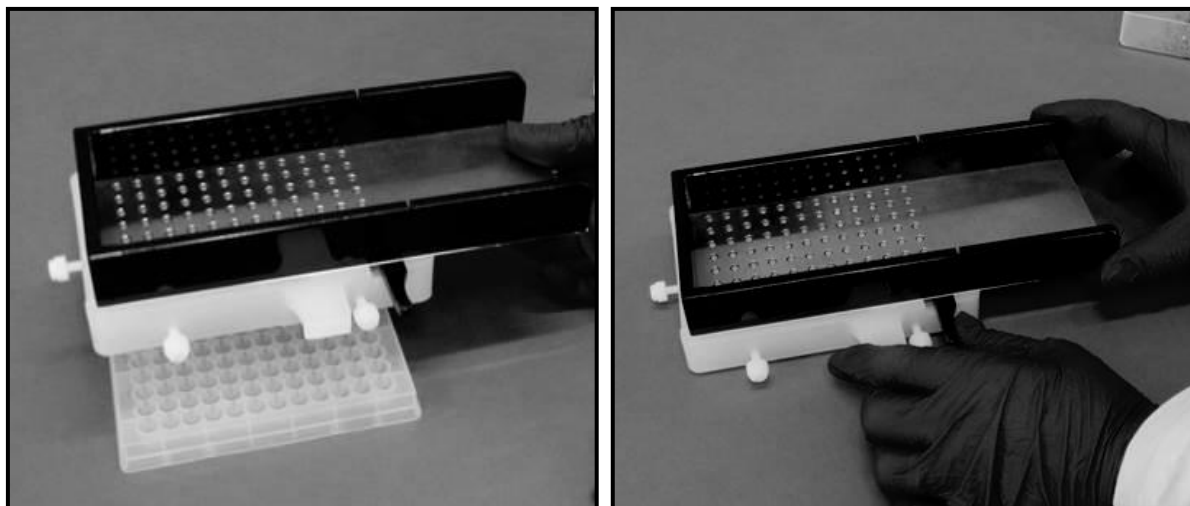
5. When all of the holes are full, remove the retaining piece and tilt the Dispenser with its ramp over a sterile beaker or other suitable container and move the ramp end of the Dispenser side-to-side so the excess Tumble Stir Elements slide down the ramp into the beaker (gently tapping the ramp end of the dispenser against the beaker or container while moving side-to-side will help to dislodge any Tumble Stir Elements that did not initially slide off).



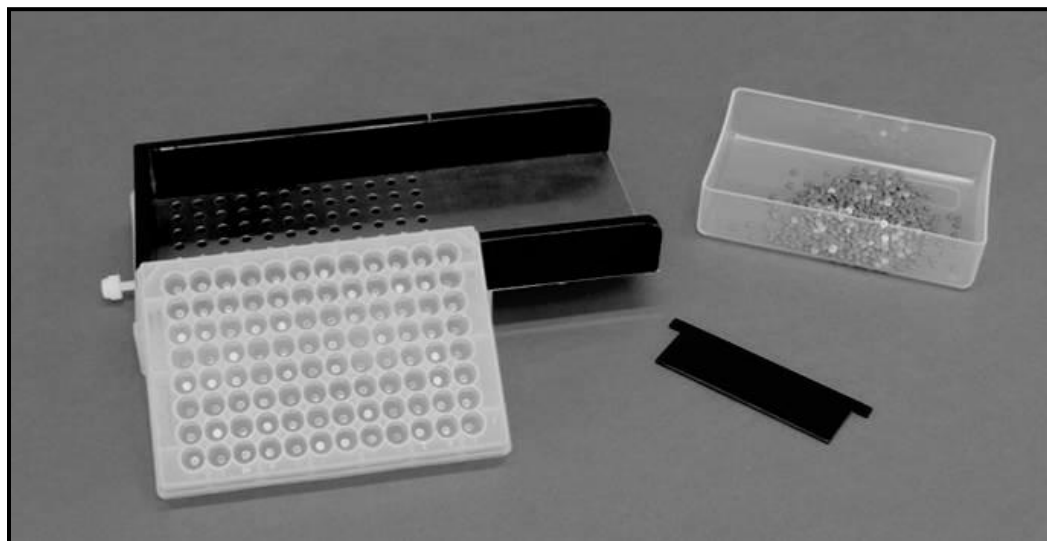
Removing retaining piece (left) so Stir Elements not in the holes can be poured off into a tray (right).

6. Visually ensure that there is one Tumble Stir Element per hole.

- Place the Dispenser on a microplate or reaction block with vials and dispense the Tumble Stir Elements by pulling on the plastic trigger to align the holes in the top plate of the Dispenser with the holes in the bottom plate. Repeat this process 3 times and visually verify that each Tumble Stir Element has fallen through the holes.

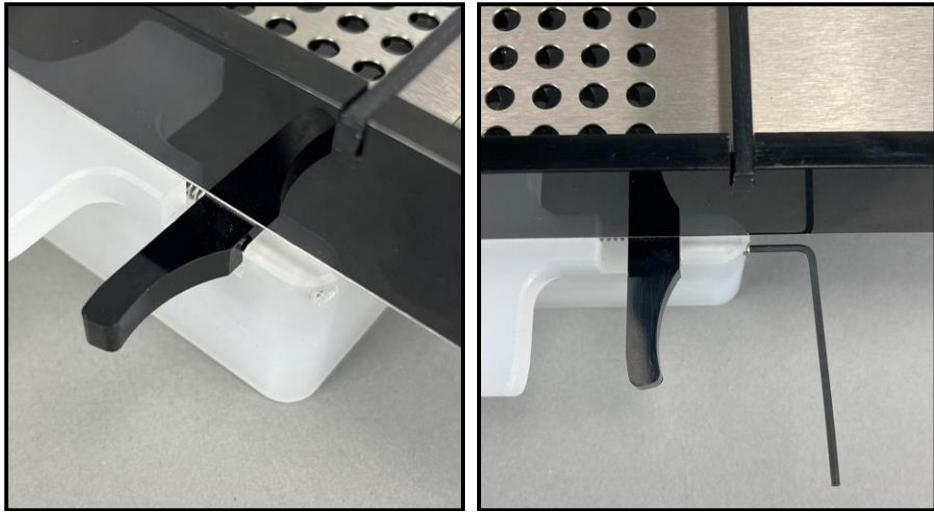


Placing Dispenser with Stir Elements in the holes on top of microplate (left) and pulling lever. To align top and lower sliding plates to drop Stir Elements through holes (right).



- Visually ensure that there is one Tumble Stir Element per well.
- Magnetize the Tumble Stir Elements in the microplate or reaction block with vials by placing it on the Magnetic Tumbler™. Samples are ready to mix.
- To recover Tumble Stir Elements from microplates or tubes, use a V&P Scientific Magnetic Replicator with the VP 770 Magnet Recovery System if sample is to be left behind. If the sample has been removed simply invert the plate and catch the Tumble Stir Elements in a suitable container.

11. Cover the collection container with aluminum foil and demagnetize the Tumble Stir Elements by passing them over the VP 781 Demagnetizer or another commercial demagnetizer.
12. Clean the Tumble Stir Elements using detergents appropriate to the application. Sterilize and dry the Tumble Stir Elements by autoclaving or baking in a hot air oven.
13. Maintenance:
 - a. Keep clean and dry as any dirt or salt residue in between the two plates with holes (top plate and sliding plate below) can prevent them from sliding during dispensing.
 - b. Before each use make sure that the two plates with holes are properly aligned relative to one another. This can be adjusted by moving the set screw next to the dispensing lever (see below).



Drop Dispenser adjustment for sliding plate position while dispensing.



Incorrect (left) and correct (right) sliding plate position relative to top plate.

WARRANTY

V&P Scientific, Inc. warrants this product to be free from defects in material and workmanship when used under normal laboratory conditions for one year. This warranty begins from the date of delivery by V&P Scientific.

In the event this product fails under normal laboratory conditions within the specified period of time because of a defect in material or workmanship, V&P Scientific will, at its option, repair or replace the product. Damage to the product caused by user negligence is not covered.

This warranty is made in lieu of other warranties expressed or implied including the warranties of merchantability and fitness for a particular purpose. V&P Scientific shall not be liable for loss or damages arising from the use of these products.

Please keep the special shipping carton in case the unit needs to be shipped back to V&P Scientific. Please contact V&P Scientific for return authorization and shipping instructions.

If technical assistance is required, contact: V&P Scientific, Inc. at 858-455-0643 or sales@vp-sci.com

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