



TIPS ON THE CARE AND USE OF DELRIN FLOATING PIN REPLICATOR STRIPS

Disinfecting:

The Replicators Strips can be sterilized by treating in 10% bleach or isopropyl alcohol.

The pins can be cleaned between source plates by dipping briefly in a 10% bleach solution, followed by a series of two sterile dH₂O baths (all in tip lid boxes), then a 99% isopropanol bath. The pins can be air dried or dried using a hair drier. Between baths, remove the liquid from the pins by blotting on a [lint-free blotting paper \(VP 522\)](#). This blotting step is very important to reduce carry over. It is important that the pins be dry before going into the next source plate.

Hydrogen peroxide may also be used to disinfect the pins as long as it is rinsed off with distilled water. The % of hydrogen peroxide necessary will vary between applications.

It is important that the liquid in the baths not get into the pin slide holes as that will interfere with the pins floating freely. We recommend only filling the baths with just enough liquid to cover the "high water mark" of the liquid in the microplates. Thus it is best not to "float" the pins when cleaning them.

Care:

Before each day's use we recommend that the pins be cleaned with [VP 110 Pin Cleaning Solution](#), which is designed to clean stainless steel and condition the pins. If the pins should be coated with organic material, they can be mechanically cleaned with the [VP 425 brush](#) and Ivory dish detergent. If you have access to an ultrasonic bath we recommend using MICRO 90®, from Cole Parmer®, at a 1/100 dilution in the ultrasonic bath. If you use an ultrasonic bath, hold the Replicator in the bath without letting the pins touch the bottom of the reservoir (the vibrating bottom surface of the sonicator's reservoir may damage the pin tips). The Cole Parmer Catalog #P-08857-02 ultrasonic cleaner is ideal for cleaning the Replicators. It is not necessary to clean the replicators in an ultrasonic cleaner if you clean the pins with bleach and brush with detergent after each day's use.

Note: If you are having problems with varying volumes of liquid on the tips, clean the pins with the [VP 110 Pin Cleaning Solution](#). Cleaning with the V&P Pin Cleaning Solution will reduce the surface tension on the pin and this will solve 99% of your pin loading problems. Also, you can add 0.005% Sarcosyl, Tween 20, protein or carrier DNA to lower the liquid surface tension.

Use:

1. Hold a 8, 12, 16 or 24 Floating Replicator Strip at a 90° angle to the source plate. Mix contents of wells by raising and lowering the Replicator Strip.

2. Raise and lower pins 3 times through the meniscus to load the pins. The speed at which the pins are removed from the wells will affect the size of the hanging drops and the liquid on the sides of the pin. Removing the pins quickly from the source plate produces large, hanging drops on the tips of the pins and more liquid on the sides. We recommend removing the pins at a slow, even speed each time (~.5 cm/sec). This action produces very uniform spots from plate to plate and reduces the amount of liquid hanging on the tip and sides of the pins.

3. The liquid can be delivered to another microplate containing liquid or to a membrane or other absorbent surface. If you deliver to another microplate with liquid, dip and raise the pins 3 times through the recipient plate's meniscus. If you blot on to a membrane, have a soft absorbing pad under the membrane ([VP 522](#), [VP 521](#), or [VP 521V](#)) and press gently on the replicator strip.

Test your Replicator strip using dye (5% red food coloring) in 10 mM Tris, pH 8.0 with 0.005% Sarcosyl or Tween 20 as wetting agents in water.

Warning

- **Do not soak in bleach solutions for long periods of time as this can corrode the stainless steel pins.**
- **Do not soak in deionized water as this can corrode the stainless steel pins.**
- **Do not autoclave as the delrin will warp.**