



# INSTRUCTION MANUAL

## Z-MOLDS

Microinjection & Transplantation Molds



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## ABOUT THIS MANUAL

The following symbols are used in this guide:

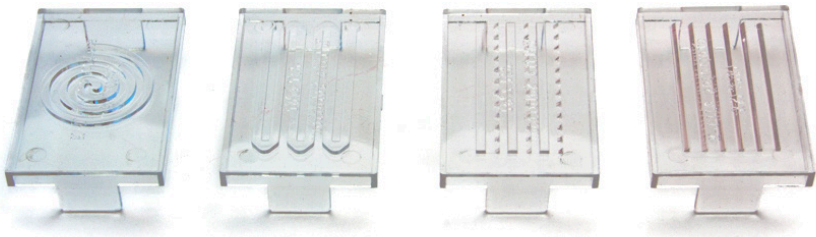


This symbol indicates a CAUTION. Cautions warn against actions that can cause damage to equipment. Please read these carefully.



This symbol indicates a WARNING. Warnings alert you to actions that can cause personal injury or pose a physical threat. Please read these carefully.

NOTES and TIPS contain helpful information.



*Fig. 1—Z-Molds are a set of four molds that can be pressed into liquid agarose to create channels for work on zebrafish embryos and other cells requiring microinjection.*

## INTRODUCTION

Z-MOLDS Microinjection and Transplantation Molds (4 per kit) are specifically designed for zebrafish research. The molds are turned up-side down and placed in liquid agarose gel and are easily removed once it has solidified. The embryos may be pipetted into the grooves made by the mold in the agarose. The width and design of the molds enable the embryos to self-align.

## OPERATING INSTRUCTIONS

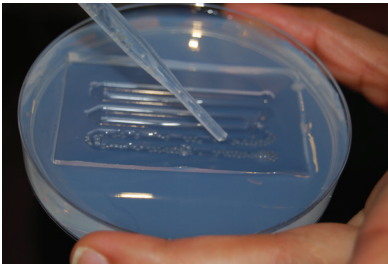
1. Dissolve 3% agarose in water and heat until the solution boils.
2. Carefully pour the molten agarose into your petri dishes. The solution will be hot, so take necessary precautions to avoid injury.
3. Rinse the Z-MOLDS with cold water.
4. Place your molds with the ridged side down in the molten agarose.



*Fig. 2—(Left) The Z-Molds are placed with the ridged side down in a liquid agarose gel.*

*Fig. 3—(Right) Allow the gel to solidify.*

5. Allow the agarose to solidify. For a speedier setup time, store the agarose in a freezer at 4°C.
6. Once the agarose has solidified, bend the agarose plate to loosen the mold. Then, use the handles on the top side of the mold to gently remove it from the agarose. The agarose plates are ready for use.



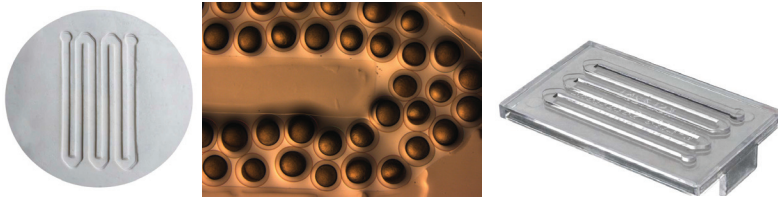
*Fig. 4—Pipette your Zebrafish embryos into the grooves in the agarose.*

## APPLICATIONS

### Large Scale Transfection

Each Z-Mold is made for large-scale transfection of Zebrafish embryos. Each configuration allows for greater efficiency and control over your embryonic samples.

This mold is designed for injecting many embryos-up to 1000. The grooves made by the mold in the agarose gel enable the embryos to self align.



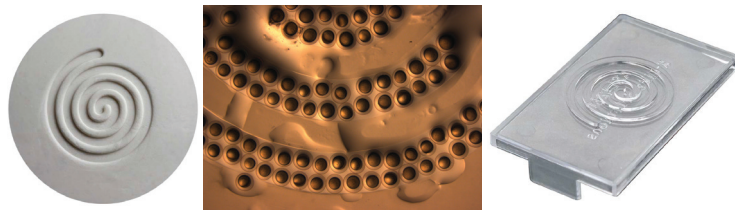
*Fig. 5—The zig-zag mold allows up to 1000 embryos to self align.*

This mold is designed for larval injections. The sloped ridges make perfect angles in the agarose gel, which then makes it easier to do microinjections in the larvae.



*Fig. 6— The parallel mold are an excellent choice for larval injections.*

This mold is designed for increasing the speed of doing microinjections. Simply turn the petri dish as you are injecting.

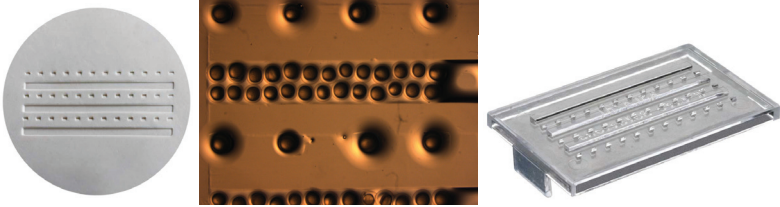


*Fig. 7—The spiral mold offers a quicker option for microinjections as you continually rotate without have to restart at the beginning of a new row.*

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## Small Scale Sample Isolation

This mold is designed for blastomere transplanation.



*Fig. 8—The individual compartments allow for utmost isolation and control of individual embryos.*



## MAINTENANCE

### Sterilization Methods

- Place the Z-Molds under UV light in a laminar hood for 30-45 minutes.
- Spray the Z-Molds with 70% Ethanol (EtOH) and immediately wipe with Kimwipe® or sterile cloth.



**CAUTION:** The Z-Molds may become opaque with repeated EtOH exposure.

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- If autoclaving is required per your institution, place the Z-Molds (unwrapped) in a self-sealing autoclave bag. Using the flash sterilization method, run a test cycle on the autoclave (121°C, 15-25 PSI, for 10-20 minutes).



**CAUTION:** The duration of a pre-vacuum cycle may vary between autoclave manufacturers. Frequent, extended, or full-vacuum cycle exposure may reduce the lifespan of the Z-Molds. Ppolyurethane Z-Molds may turn opaque with steam exposure.

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## **WARRANTY**

WPI (World Precision Instruments) warrants to the original purchaser that this equipment, including its components and parts, shall be free from defects in material and workmanship for a period of 30 days\* from the date of receipt. WPI's obligation under this warranty shall be limited to repair or replacement, at WPI's option, of the equipment or defective components or parts upon receipt thereof f.o.b. WPI, Sarasota, Florida U.S.A. Return of a repaired instrument shall be f.o.b. Sarasota.

The above warranty is contingent upon normal usage and does not cover products which have been modified without WPI's approval or which have been subjected to unusual physical or electrical stress or on which the original identification marks have been removed or altered. The above warranty will not apply if adjustment, repair or parts replacement is required because of accident, neglect, misuse, failure of electric power, air conditioning, humidity control, or causes other than normal and ordinary usage.

To the extent that any of its equipment is furnished by a manufacturer other than WPI, the foregoing warranty shall be applicable only to the extent of the warranty furnished by such other manufacturer. This warranty will not apply to appearance terms, such as knobs, handles, dials or the like.

WPI makes no warranty of any kind, express or implied or statutory, including without limitation any warranties of merchantability and/or fitness for a particular purpose. WPI shall not be liable for any damages, whether direct, indirect, special or consequential arising from a failure of this product to operate in the manner desired by the user. WPI shall not be liable for any damage to data or property that may be caused directly or indirectly by use of this product.

## **Claims and Returns**

Inspect all shipments upon receipt. Missing cartons or obvious damage to cartons should be noted on the delivery receipt before signing. Concealed loss or damage should be reported at once to the carrier and an inspection requested. All claims for shortage or damage must be made within ten (10) days after receipt of shipment. Claims for lost shipments must be made within thirty (30) days of receipt of invoice or other notification of shipment. Please save damaged or pilfered cartons until claim is settled. In some instances, photographic documentation may be required. Some items are time-sensitive; WPI assumes no extended warranty or any liability for use beyond the date specified on the container

Do not return any goods to us without obtaining prior approval and instructions from our Returns Department. Goods returned (unauthorized) by collect freight may be refused. Goods accepted for restocking will be exchanged or credited to your WPI account. Goods returned which were ordered by customers in error are subject to a 25% restocking charge. Equipment which was built as a special order cannot be returned.

## **Repairs**

Contact our Customer Service Department for assistance in the repair of apparatus. Do not return goods until instructions have been received. Returned items must be securely packed to prevent further damage in transit. The Customer is responsible for paying shipping expenses, including adequate insurance on all items returned for repairs. Identification of the item(s) by model number, name, as well as complete description of the difficulties experienced should be written on the repair purchase order and on a tag attached to the item.

*\* Electrodes, batteries and other consumable parts are warranted for 30 days only from the date on which the customer receives these items.*



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