

# Coverslip Clamp Chambers

MS series

Ver. 2.0 10.15

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# Introduction

A practical and convenient solution for mounting tissue preparations or cell cultures during electrophysiology or imaging experiments.

MS Chambers secure tissue or cell preparations on coverslips. Dual compressible o-rings secure the coverslips without adhesives. Chambers that accommodate several sizes of coverslips are available with options suitable for most applications.

The coverslip clamp dish represents a unique concept in experimental chamber design. It allows the user to constantly replace the bottom of the dish while leaving the rest of the dish intact. This way, cells can be cultured on coverslip glass (also called cover glass) and then the coverslip can be incorporated into the chamber at the time of the experiment. The chamber, which can be quite elaborate, does not need to be occupied for days in the incubator itself.

The size and shape of the chamber match the dimensions of the Corning 35mm petri dish. The chambers can fit wherever a Corning 35mm dish can fit.

The chambers can use either #1 or 2 cover glass only.

#### Materials

All chambers are black in color and are made of Dupont Delrin<sup>™</sup>. Delrin<sup>™</sup> is preferred since it is opaque to light (black in color). Securing rings can be made out of stainless steel or Delrin<sup>™</sup>. Stainless steel is recommended. Stainless steel is also necessary for temperature control applications.

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# Warranty

ALA Scientific Instruments, Inc. agrees to warranty this product against defects in material and workmanship for 90 days from date of shipment. Remedy shall be limited to replacement or repair of the item(s) at ALA's discretion. The usage of this product by the user will indicate the users understanding of the use of this product as set forth in this manual. Neither ALA Scientific Instruments, Inc., nor any of its affiliates will be held responsible for damage to laboratory equipment, including microscopes, resulting from the use or misuse of this product, including damage resulting from inputs exceeding specified limits that result in malfunction to or from this device.

In the event that warranty repairs are necessary, shipping charges to the factory are the customer's responsibility. Return charges will be paid by ALA Scientific Instruments for warranty repairs only.

This instrument is not for clinical use. It is strictly for basic research in a laboratory setting. It has no clinical application whatsoever and cannot be used on human subjects.

## **Care and Cleaning**

Chambers should never be cleaned with petroleum products. Use regular dishwashing soap or a diluted bleach solution.

A thorough cleaning should include removal of the o-rings to clean the oring channels as well. The chambers can be cleaned in a dish washer. Autoclaving is also possible, but not recommended since high heat can warp and degrade plastics. For cleaning and sterilization, use as low a temperature as possible and never exceed 110°C. Always be sure chambers are clean and dry when they are packed for storage.

The stainless steel securing ring is made from 316 stainless steel. However, the use of saline solutions can affect almost all steels. Some pitting or staining is possible over time. Try to keep the steel securing rings clean and dry.

# Troubleshooting

The coverslip clamp chamber stays closed by the friction of the securing ring to the outer o-ring. The outer o-ring does not help seal in the liquid. Only the inner o-ring seals the liquid in. If the chamber leaks it can be for several reasons:

Problem	Solution
Inner o-ring is not seated properly	Press inner o-ring into groove
Outer o-ring does not grip securing ring	Replace outer o-ring
Cracked cover glass	Open chamber, inspect/replace glass
Nicked inner o-ring	Replace inner o-ring.
Warped dish	Refer to factory
Warped securing ring	Refer to factory
Particles trapped on or under inner o-ring	Remove/clean o-ring and groove

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# Setup

A coverslip clamp chamber is easy to assemble. First place the Securing Ring on a firm level surface with the lip upward. Place the cover-slip, cell-side-up, onto the ring, being careful to center it. Push the body of the dish into the securing ring by applying firm pressure. The sealing o-ring will be compressed against the glass and form a water tight seal. The securing o-ring holds the Securing Ring in place by friction. When applying firm pressure to the assembly, be sure to push down evenly all around. The chamber should now have a leak free seal.



To open the chamber, simply pull the securing ring off. If it is difficult, you can use a small tool such as a screwdriver, just be careful not to damage the chamber. The chambers are designed to be opened by hand and this is the preferred method of opening.



