



# MEA Covers for Sterile Culture

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MEA-MEM & MEA-MEM5

Instructions

Ver. 2.1

2.19

\*This product is manufactured under license from the California Institute of Technology.

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## MEA-MEM5 checklist

- MEA membrane Insertion Tool
- MEA-MEM w/ O-ring & MEM-SHEET attached x5
- MEM-SHEET x 5
- O-ring #21 x 5
- Instruction Manual



**MEA-MEM** covers are also sold in single quantities.

Single units only include the **MEA-MEM** ring with membrane sheet and O-rings attached.

## Warranty

ALA Scientific Instruments, Inc. agrees to warranty this product against defects in material and workmanship for 30 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.

Note: Membrane sheets and O-rings are not warrantied.

## Cleaning the MEA-MEM

MEA Cover should be disassembled for complete washing. Remove O-rings and membrane sheet.

Clean MEA cover using only soap and water. Rinse in distilled water.

Up to 70% alcohols are acceptable for cleaning the MEA covers.

If necessary the MEA covers may be gassed sterilized.

***Do Not Autoclave MEA MEM Ring as damage may occur.***

***Do Not use cleaning solvents other than those described above.***

\*Autoclaving MEA cover will void warranty.

Replace as necessary.

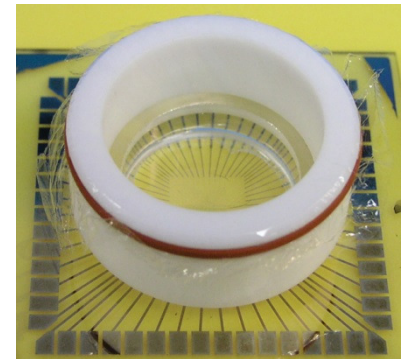
It is recommended to replace both the MEMBRANE sheet and O-rings after cleaning the MEAMEM ring.

## MEA Covers for Sterile Culture

### MEA-MEM Systems Assembly Instructions

MEA-MEM chamber covers work with special foil from DuPont, made of a Teflon polymer that is permeable to gases such as O<sub>2</sub> and CO<sub>2</sub>, but not water. Thus cultures can grow in incubators that are dry which reduces the incidence of contamination. Cultures can be removed from the incubator and observed without fear of contamination, or drying out, and they can be cultured directly on heated MEA systems.

Each MEA-MEM cover has two O-rings, an inner and an outer. The inner O-ring and the outer are both #21. The inner O-ring is used to seal the chamber against the wall of the MEA chamber, the outer one holds down and seals the foil. Use caution when installing the MEAMEM since the friction it creates can pull the ring off the MEA. To install the inner O-ring, simply push the #21 O-ring into the inner groove until it is worked in all the way around.



The membrane can be replaced by hand, simply pulling the O-ring over it, but for a ripple-free finish, it should be installed using the MEA-MEM-T insertion tool.



## Membrane Sheet Placement

Place the membrane (MEMSHEET) over the MEAMEM ring. Make sure that the end of the MEM ring with the O-ring groove on the outside is up.



Place O-ring (#21) over the end of the insertion tool on the shallow cut side

Push the shallow cut end of the TOOL down over the end of the MEM ring so that it pushes down the membrane. Applying pressure to the TOOL stretches the membrane. Slip the O-ring down until it slides off the TOOL and into the groove.



Remove the TOOL and gently push the O-ring into the groove all around.



Next, place the tool on the table with the deep-cut side up.

Insert the MEA-MEM ring into the tube with the membrane end down. Push MEAMEM into the tool as far as it will go.



The TOOL now becomes a guide so that the excess membrane sheet can be cut away with a sharp razor blade or scalpel. Always leave 2-4mm of foil beyond the O-ring for a secure fit. Be sure to use a sharp blade so that the foil is completely cut. Pulling on the foil can cause ripples across the membrane.

When finished, the membrane should be neat and flat on top. Excess membrane can be discarded, or saved for future use if enough remains.

