MS Chambers
for Recording and Imaging

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

ALA Scientific's MS Imaging and Recording Chambers secure tissue or cell preparations on glass coverslips. Dual compressible o-rings secure coverslips without adhesives or vacuum grease. Chambers that accommodate several sizes of coverslips are available with options suitable for most applications.

MS Chambers Features:

- Compatibility with ALA's MS-Stage or 35mm specimen holders
- Fits ALA's HCMIS and HCS temperature controlled stages
- Double o'ring seal / grooved undercut bottom to secure coverglass
- Shallow depression on botton clamp for easy cover glass placement

Available options include:

- Built-in perfusion ports
- No walls for electrode access
- Stainless steel bottom for temperature control applications or black Delrin bottom for no reflection during imaging studies
- Oval interior for efficient solution exchange (laminar flow)
- Custom designs available

MS-502 Chambers:

- For use with 24/25mm #1 or #2 round cover glass
- Large round chamber inner diameter 0.75"/19mm


MS-502D


MS-502DW


S - stainless steel bottom


MS-502SP


MS-502SWPW


MS-502SWP


D - Delrin bottom

MS-508 Chambers:

- For use with 18mm round #1 or #2 cover glass
- Small round chamber inner diameter 0.5"/12.7mm


MS-508D


MS-508DW


S - stainless steel bottom


MS-508SP


MS-502SWPW


MS-508SWP


D - Delrin bottom

MS-512 Chambers:

- For use with 12mm round #1 or #2 cover glass.
- Tiny round chamber inner diameter 0.325”/8.26mm


MS-512D


MS-512DW


S - stainless steel bottom


MS-512SP


MS-512SWPW


MS-512SWP


D - Delrin bottom

MS-518 Chambers:

- For use with 24/25mm round #1 or #2 cover glass.
- Oval interior 0.75”/19mm x 0.375”/9.5mm
- Excellent for laminar solution flow


MS-518D


MS-518DW


S - stainless steel bottom


MS-518SP


MS-518SWPW


MS-518SWP


D - Delrin bottom

Part numbers and ordering information

MS-5 □ □ □ □ □ □

Chamber style

02 = chamber that uses 24/25mm round cover glass with a 0.75”/19mm round internal opening

08 = chamber that uses 18mm round cover glass with a 0.5”/12.7mm round internal opening

12 = chamber that uses 12mm round cover glass with a 0.325”/8.26mm round internal opening

18 = chamber that uses 24/25mm round cover glass with a 0.75”/19mm x 0.375”/9.5mm oval internal opening

Chamber bottom style

S = stainless steel bottom, excellent when used for temperature control

D = black Delrin bottom, excellent when used for imaging only

Chamber walls

W = remove chamber walls for excellent electrode access

X = not used, chamber walls not removed

Perfusion ports

P = perfusion ports 180° apart with 1/16” barbed fittings

X = not used, no perfusion ports

Perfusion port walls

W = remove perfusion ports base and fittings

X = not used, perfusion ports with walls

Imaging/Recording Chambers

Closed Perfusion

Round Chamber

The Perforated O-Ring Closed Cellular Perfusion Chamber is designed for perfusion of cells cultured on coverslips during imaging experiments. The closed design enables control of solution application under sterile conditions. Its round shape emulates a 35mm Petri dish and is designed to fit into ALA's HCMIS or HCS for when temperature control is needed. Thin cover glass that form the chamber allow for high magnification optics to be use.

- Stainless steel construction of the chamber
- 1.75mm distance between coverglass is standard
- 15mm opening for use with high magnification objectives
- Fits #1 round 24/25mm coverglass
- Low solution volume

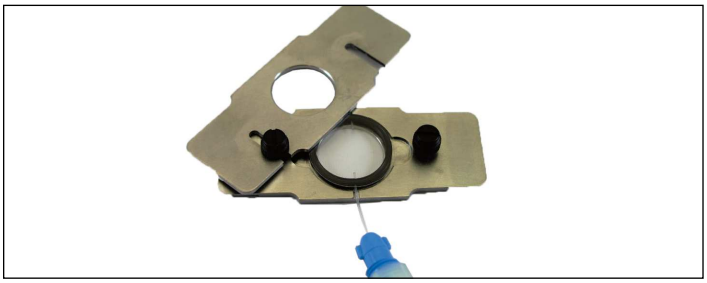
Specifications for MS-CPC	
Dimensions	35mm x 7mm Approx.
O-ring	Standard is 12mm ID x 1.75mm high. (Square profile.)
Unit works best with 25mm round cover glass. Other sizes can be substituted so long as viewing hole supports the size. (Specifications subject to change.)	

Closed Perfusion

Flat Chamber

The low profile closed perfusion chamber is designed to fit in place of a standard microscope slide. It allows for easy viewing with upright or inverted microscopes. The viewing port is 19mm. Number 1 cover glass is the recommended thickness and a quad profile o-ring is employed to provide maximum sealing surface and stability.

- Standard microscope slide size
- 19mm opening for use with high magnification objectives
- Stainless steel construction
- 1.75mm distance between coverglass is standard
- Low solution volume

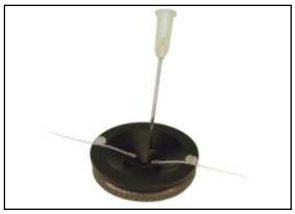


Specifications for MS-CPC Flat	
Dimensions	76.5L x 30.5W x 5.5H mm
O-ring	#19 Buna-quad profile
Coverglass	#1 25mm
Inlet tube	PE-10
Outlet (Suction) tube	1mm maximum OD (Any tube)
Material	316 Stainless Steel
Weight	58g
Screws (knobs)	6-32 thread

Oocyte Perfusion

Chamber

The MS-OPC is a unique chamber that uses a funnel effect to channel perfusion solutions around the oocyte in a very efficient manner. The solution flows from the



bottom up with the suction at the top of the oocyte. There is plenty of room for electrode manipulation. The chamber uses a cover glass as its bottom and a double o'ring to clamp the cover glass to the chamber.

Ordering information

Chamber

MS-CPC	Closed perfusion chamber for imaging - round
MS-CPC-FLAT	Closed perfusion chamber for imaging - flat
MS-OPC	Oocyte perfusion chamber
MS-OPC-P	Oocyte perfusion chamber w/2 pellets attached

HSG

Harp Slice Grids™

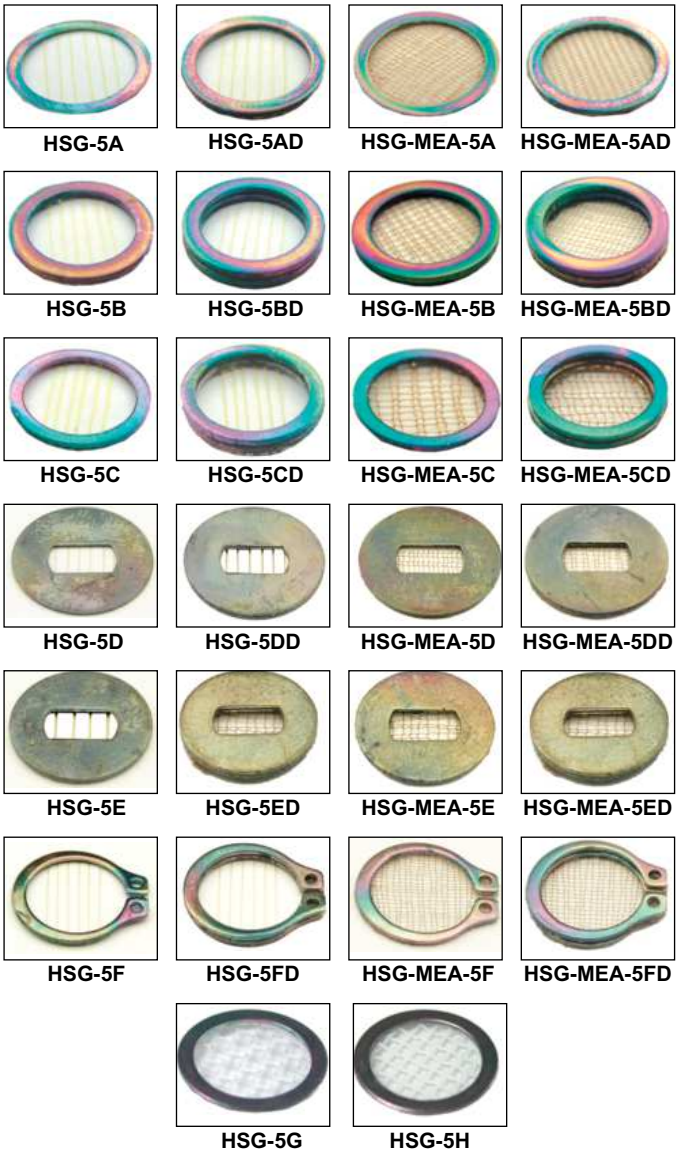
ALA Scientific's Harp Slice Grids™ (HSG) are glass coated steel rings with polyimide coated silica fibers or nylon mesh available in a variety of configurations for suitability on most preparations. These durable and inert materials prevent drifting of submerged slices without impeding superfusate access. HSG are ideal for use with conventional electrophysiological recording and stimulation methods as well as multielectrode array recording techniques.

Harp Slice Grids™:

- Glass-coated steel attachment rings are rigid, inert, and dense
- Polyimide-coated silica capillary tubing are also inert, long-lasting, rigid, and are spaced widely to allow electrode positioning from the top
- Tightly-woven nylon mesh are spaced narrowly and hold slices securely with out impeding superfusate access
- Wide variety of sizes and weights are suitable for most preparations
- Custom grids may be available for specialized applications

Options include:

- Single or double rings for increased weight
- Oval or round interior for different perfusion setups
- Parallel or grid string pattern
- Resistant silica coating



Ordering information and Specifications- All are 5 in a Pack			
String spacing is 1mm and the each string is ~ 50-65um thick		Tan Nylon mesh with 1mm² spacing	
HSG-5A	9.5mm ID x 12mm OD x 0.5mm thick; 0.2g	HSG-MEA-5A	9.5mm ID x 12mm OD x 0.5mm thick; 0.2g
HSG-5AD	same as above but 1.0mm thick and 0.4g	HSG-MEA-5AD	same as above but 1.0mm thick and 0.4g
HSG-5B	9.5mm ID x 12.75mm OD x 0.83mm thick; 0.4g	HSG-MEA-5B	9.5mm ID x 12.75mm OD x 0.83mm thick; 0.4g
HSG-5BD	same as above but 1.64mm thick and 0.8g	HSG-MEA5-BD	same as above but 1.64mm thick and 0.8g
HSG-5C	6.4mm ID x 8mm OD x 0.5mm thick; 0.05g	HSG-MEA-5C	6.4mm ID x 8mm OD x 0.5mm thick; 0.05g
HSG-5CD	same as above but 1.0mm thick and 0.1g	HSG-MEA5-CD	same as above but 1.0mm thick and 0.1g
HSG-5D	6.0x3.3mm ID x 12.7mm OD x 0.54mm thick; 0.18g	HSG-MEA-5D	6.0x3.3mm ID x 12.7mm OD x 0.5mm thick; 0.17g
HSG-5DD	same as above but 1.07mm thick and 0.35g	HSG-MEA-5DD	same as above but 0.8mm thick and 0.35g
HSG-5E	4.8x2.5mm ID x 9.5mm OD x 0.5mm thick; 0.1g	HSG-MEA-5E	4.8x2.5mm ID x 9.5mm OD x 0.6mm thick; 0.4g
HSG-5ED	same as above but .85mm thick and 0.2g	HSG-MEA-5ED	same as above but 1.0mm thick and 0.8g
HSG-5F	10.0mm ID x 13.8mm OD x 0.8mm thick; 0.18g	HSG-MEA-5F	10.0mm ID x 13.8mm OD x 0.8mm thick; 0.14g
HSG-5FD	same as above but 1.8mm thick and 0.33g	HSG-MEA5-FD	same as above but 1.5mm thick and 0.31g
HSG-5G	9.5mm ID x 12mm OD x 0.5mm thick; 0.2g - polyester mesh with 800um² grids		
HSG-5H	9.5mm ID x 12mm OD x 0.5mm thick; 0.2g - nylon white mesh with 1mm² grids.		
Custom types may be available but minimum quantity orders will apply, please consult factory			