Heating/Cooling MicroIncubator Stage

HCMIS

Investigators who perform electrophysiology or imaging experiments in-vitro often choose to perform experiments at non-ambient temperatures in order to elucidate mechanisms or to enhance physiological relevance. This capability can be added to almost any setup with the **ALA HCMIS**.

The **ALA HCMIS** simplifies temperature control for demanding electrophysiology and imaging applications. The grooved bottom of the instrument allows it to fit snugly on Nikon, Olympus and Zeiss microscope stages as well as Gibraltor, Narishige, Sutter and Scientifica platforms. For cooling applications, the side ports enable water circulation to cool preparation to near freezing temperatures. The gas ports allow gas to flow over the bath when necessary, for improved oxygenation and pH control with bicarbonate based buffers. A flexible, shielded, multiconductor cable attaches the **HCMIS** to the **ALA HCT** temperature controllers or the npi electronic PTC heating/cooling controllers to make a complete system.

HCMIS shown with gas ports and magnetic mounting plate installed at top and MS-502 chamber in middle

HCMIS Features:

- Dual Peltiers and anodized Al construction ensure uniform heat exchange
- Base fits most major manufacturers' stages & platforms
- Chamber well accommodates MS recording chambers or 35 mm Petri dishes
- Chamber design compatible with immersion objectives
- Chamber wall cut outs ease electrode access
- Shielded flexible cable minimizes electrical noise
- Low-profile & built-in water ports minimize vibration during cooling
- Gas ports enable oxygenation of slice preparations
- Built-in thermistor for monitoring block temperature
- Optional steel top plate for use with magnetic tools

Ordering Information for the HCMIS	
HCMIS	Heating/Cooling MicroIncubator stage
HCMIS-MAGP	Magnetic top plate for HCMIS

Specifications	
HCMIS - Dimension & Weight	127x116x16 mm LWH - 375g
Max Volts/Amps	14.4V/3.7A
Perfusion Tubing	PTFE - 2.4mm ID x 3.8mm OD
Min./Max. Temperature	0ºC to 55ºC
Perfusion tubing recommended flow rates	0 to 2ml/min
Recommended heat sink water flow	>300ml/min
Typical temperature ramp speeds using npi peltier controller, block control	25ºC to 13ºC - 2:30 min/ 25ºC to 37ºC - 1:45 min. gain/limiter = 75%, integral = 0%25ºC to 13ºC - 2:30 min/ 25ºC to 37ºC-1:45 min. gain/limiter = 75%, integral=0%
Typical temperature ramp speed w/ npi peltier controller, block control, MS502SW chamber, 1ml fluid, heat sink water flow, bath probe monitoring	22ºC to 10ºC - 2:30 min. / 22ºC to 37ºC - 1:45 min. gain/limiter = 75%, integral = 0%
Microscopes and platforms supported w/o adapter plates	Nikon TESR stage, Olympus IX stages w/110mm opening, Zeiss frame K, Gibraltar, Narishige ITS, Scientifica - other stages available
Cable information	8 conductor; 2 for Peltiers, 2 for built-in thermistor, 4 unused, with DIN connector

Scientific Instruments
Web: www.alascience.com
E-Mail: sales@alascience.com