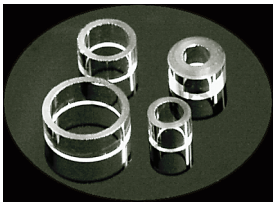
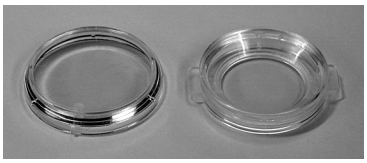
BIOPTECHS

Biological Optical Technologies

Established Standards for Live-Cell Microscopy



Bioptechs Culture Cylinder & Delta T® Dish Samples



Description:
Culturing Cylinders are used to barricade cells or suspended specimens in a Delta T® Dish; or to restrict and concentrate the growth and location of cells plated on a coverslip. They are 5mm high and available in a variety of inside diameters including, 2mm, 4mm, 6mm, 8mm, 10mm, and 12mm. The outer diameter is always two mm greater than the inside diameter due to the 1mm wall thickness. The cylinders are made of Pyrex glass, optically polished on the bottom surface to mate with and form a seal with other glass surfaces such as coverslips and Delta T® Dishes. Culturing Cylinders can be autoclaved for reuse.

Usage:
Place the Culture Cylinder polished side down onto a flat glass surface such as a Delta T® Dish then pipette cells into the cylinder first filling about 2/3 full. Pipette additional media without cells around the Culture Cylinder to an equal level of the contents of the Culture Cylinder. Incubate until cells plate. The Culture Cylinder can be removed after cells have plated, there will be no residuals. The cells can continue to proliferate or move at will. Use to isolate adjacent cells, growth media, inhibitors, chemo-attractants, etc.

Delta T® Dishes
Delta T® Dishes are made of a polystyrene ring which has a specially coated clear glass substrate bonded onto the bottom surface forming a 2ml liquid containment structure having a 35mm OD which tapers down to a 23mm optical aperture. The glass substrate is available in two thicknesses, 0.5mm for low N.A. and #1.5 coverslip for high N.A. applications. In standard production, the 0.5mm thick substrate is bonded to a clear dish ring and shipped with clear lids. The #1.5 coverglass is available bonded to black or clear dish rings and shipped with corresponding lids. All other characteristics of the dishes are identical. We recommend the use of black dishes for fluorescence applications.

The thickness of the dish can also be determined from the stock number on the dish package.

Part No. 04200405 = 0.5mm thick clear
04200415B = #1.5 coverslip thickness black
04200415C = #1.5 coverslip thickness clear

High Numeric Aperture Use:
If you are using high numeric aperture immersion objectives typically with high N.A. dishes, it will be necessary to regulate the temperature of the objective as well. This is due to the fact that the optical coupling medium, oil, glycerin or water, also has a thermal coupling effect. In this case, a Bioptechs, Inc. Objective Heater and an Objective Heater Controller will be necessary for uniform temperature across the field.

Delta T® Live-Cell Micro-Environmental Control
Bioptechs introduced and established The Delta T® Culture Dish System with first surface direct thermal transfer and dual mode temperature control for imaging applications in 1993. Bioptechs has now integrated numerous customer requests into its next generation Open Culture Dish Micro-Environmental Control System, the Delta T®.

Now the following new features are included on all systems:
- TTL mode switching interface with Mode Indicator (dynamic or imaging) on the front panel
- Cold start acceleration and instant memory restoration
- Mode activation by optional foot switch
- New cell fixing mode enables cells to be fixed in the dish for permanent archiving or heat shock protein activation
- Remote setpoint port allows external settings or cycling
- Temperature output (for analog recording, Temperature / 10 / Volts) 37°C = 3.7 Volts
- User adjustable Heated Lid power supply

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