



# FluoroDish™

## GLASS BOTTOM DISH TO ENSURE OPTIMAL CELL INTEGRITY IN IMAGING RELATED RESEARCH



### Benefits of FluoroDish™

- Optical quality glass bottom for shorter working distances, larger numerical aperture and higher magnification
- Non-fluorescent glass so you can discern weaker signals
- Allows the use of immersion objectives
- Flat bottom optimizes heat exchange
- Less optical distortion and superior UV transmission
- Low cytotoxicity adhesive to ensure cells' survival
- Individually packaged and gamma sterilized
- Coated dishes available for better cell adhesion
- Blackwall dishes are available to block stray lights and reduce background noise.

WPI's **FluoroDish™** tissue culture dishes are now available in a larger range of sizes and coatings. Black wall FluoroDish™ cell culture dishes are also available. Coated culture dishes are useful in promoting cell adhesion to culture surface. Our 35mm dishes are offered with Collagen, Fibronectin, Poly-D-Lysine, Poly-L-Lysine, or Vitronectin coatings. Cited in 575 reference articles (in the NIH PubMed Central® alone), our optical grade, glass bottom culture dishes are unique in the marketplace and conform to strict quality control standards.

### Coated Dishes

Collagen coated dishes are often used to promote the adhesion and growth of various cell types, including fibroblasts, endothelial cells, and epithelial cells. Poly-L-lysine enhances cell adhesion for neurons, glial cells, and other cell types. Fibronectin is a high-molecular-weight glycoprotein of the

extracellular matrix that binds to membrane-spanning receptor proteins called integrins. Vitronectin is a glycoprotein found in the extracellular matrix and blood plasma. Poly-D-Lysine utilized in experiments involving primary neuronal cultures and cell adhesion supports neurite outgrowth on PDL coated optical glass.

### Exceptional Imaging Quality & Low Toxicity

These dishes provide exceptional imaging quality for many applications requiring the use of inverted microscopes such as high resolution image analysis, microinjection and electrophysiological recording of fluorescently-tagged cells. Taking advantage of WPI's extensive experience with low toxicity adhesives, FluoroDish™ uses a specially formulated adhesive that is optically clear, durable and with extremely low toxicity. Tests by an independent laboratory have shown that the 96-hour surviving rate of embryos is 100% when kept in FluoroDish, substantially better than some other brands. The bottom glass has superior UV transmission (30% transmission at 300 nm, compared to less than 7% for the most popular German glass). Stringent quality control ensures that glass thickness stays within the 0.17 ±0.01 mm range.

Conventional plastic dishes and chambers limit the utility of the inverted scope for many applications because the thick plastic bottom requires a long working distance objective available only in lower magnifications. Each WPI dish has a flat (0.17 mm thick) optical quality glass bottom, allowing the use of a much shorter objective working distance, larger numerical aperture (NA), and a higher magnification (up to 100x). The larger NA and higher magnification provide superior quality imaging for both classical and fluorescence microscopy. Higher effective NA yields brighter images for fluorescence and higher resolution in Image Analysis.

The glass bottom permits the use of immersion objectives with medium such as water, glycerin or oil for the highest magnification possible. To optimize heat-exchange, WPI's glass-bottom dish is designed to be flush (flat) with the microscope stage or heating unit, therefore eliminating the air gap that exists with modified plastic dishes in which a glass cover slip has been inserted.

## FluoroDish™ Sizes

Three different sizes of FluoroDish are offered, one type of 50 mm diameter dish and two types of 35 mm diameter dishes. An inner well is created within the dish by the glass bottom and the tissue culture grade polystyrene which forms the sides of the dish. All WPI dishes have the advantages of low toxicity and good UV transmission bottom glass. They are individually packed and gamma sterilized.

The 35 mm dish has outside dimensions similar to that of a Corning 35 mm dish and has  $\varnothing 23.5$  mm glass window (FD35) or  $\varnothing 10$  mm glass window (FD3510). Most heaters and perfusion adapters designed for the Corning 35 mm dish will also fit this dish.

The 10 mm glass window dish (FD3510) has low sidewall for easy microelectrode access and low solution volume. The low microelectrode access angle is the lowest among all of 35 mm dishes on the market (very close that of a 50 mm dish). The dish needs only about 115  $\mu$ L to cover the bottom well,

an important feature when using expensive drugs and chemicals.

The 50 mm dish (FD50) has a large growth area (35 mm well diameter), a low access angle for microelectrodes, and grips for easy handling.

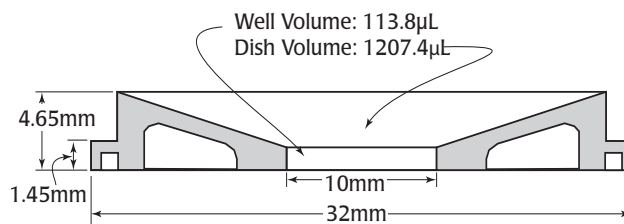


Fig. 1—FD3510

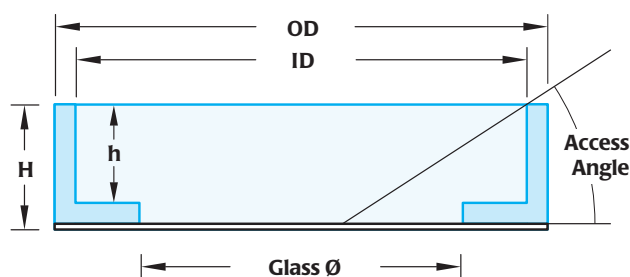


Fig. 2—Standard Fluorodish geometry. (See table below.)

## Standard FluoroDish™ Geometry

Part Number	ID (mm)	OD (mm)	Glass $\varnothing$ (mm)	Height (inside)	Height (outside)	Access Angle
FD35	33	35.5	23.5	7.8	9	29°
FD5040	47.5	49.82	35	7.25	7.4	17°

## Order Information

Order Code	Description	Coating	Wall Color
FD35-100	FluoroDish Sterile Culture Dish, Clear Wall, 35 mm, 23 mm Well, Box of 100	None	Clear
FD3510-100	FluoroDish Sterile Culture Dish, Clear Wall, 35 mm, 10 mm Well, Low sidewall, Box of 100	None	Clear
FD5040-100	FluoroDish Sterile Culture Dish, Clear Wall, 50 mm, 35 mm Well, Box of 100	None	Clear
FD35B-100	FluoroDish Sterile Culture Dish, Black Wall, 35 mm, 23 mm Well, Box of 100	None	Black
FD3510B-100	FluoroDish Sterile Culture Dish, Black Wall, 35 mm, 10 mm Well, Box of 100	None	Black
FD5040B-100	FluoroDish Sterile Culture Dish, Black Wall, 50 mm, 35 mm Well, Box of 100	None	Black
FD35PDL-100	FluoroDish Sterile Culture Dish, Poly-D-Lysine Coated, 35 mm, 23 mm Well, Box of 100	Poly-D-Lysine	Clear
FD35COL-100	FluoroDish Sterile Culture Dish, Collagen Coated, 35 mm, 23 mm Well, Box of 100	Collagen	Clear
FD35FN-100	FluoroDish Sterile Culture Dish, Fibronectin Coated, 35 mm, 23 mm Well, Box of 100	Fibronectin	Clear
FD35PLL-100	FluoroDish Sterile Culture Dish, Poly-L-Lysine Coated, 35 mm, 23 mm Well, Box of 100	Poly-L-Lysine	Clear
FD35VN-100	FluoroDish Sterile Culture Dish, Vitronectin Coated, 35 mm, 23 mm Well, Box of 100	Vitronectin	Clear



FD5040B-100



FD35B-100



FD3510B-100