CytoSoft®, Imaging
24-well Plate
Elastic Modulus 0.2, 0.5, 2, 8, 16, 32, 64 kPa

PRODUCT DESCRIPTION:

The rigidity of the substrate to which cells adhere can have a profound effect on cell morphology and gene expression. *CytoSoft®* products provide a tool to culture cells on substrates with various rigidities covering a broad physiological range.

The *CytoSoft®* - *Imaging* plate is for high-resolution imaging where low autofluorescence and exceptional optical clarity are required. Plate consists of a #1.5 thickness glass bottom bonded to a black polystyrene frame and includes a lid. The plates are sterilized using ozone and provided with 1 plate per package.

On the bottom of each well, there is a thin layer of specially formulated biocompatible silicone, whose elastic modulus (rigidity) is carefully measured and certified. The surfaces of the gels in *CytoSoft®* products are functionalized to form covalent bonds with amines on proteins. The chemical functionalization is stable and the reaction does not require a catalyst, facilitating coating of the gel surfaces with matrix proteins and plating cells.

The silicone substrates are optically clear and have a near zero auto-florescence. The layer of silicone in each well is firmly bonded to the bottom of the well. Unlike hydrogels (such as polyacrylamide gels), silicone gels are not susceptible to hydrolysis, do not dry or swell, are resilient and resistant to tearing or cracking, and their elastic moduli (rigidities) remain nearly unchanged during extended storage times.

CytoSoft®-Imaging products accommodate live cell staining using membrane and cell permeable dyes; fixation of cells using common techniques such as paraformaldexyde; and immunostaining of fixed cells.

Product Information	***CytoSoft®, Imaging* 24-well Plates**
Plate Type	Black polystyrene with glass bottom
Plate Size	24-Multiwell Plate
Quantity per package	1 Plate per Package
Rigidity (Elastic Modulus)	Exact value provided on the C of A
Storage	Room Temperature
Shelf Life	Minimum 6 months
Plate Surface Material	Functionalized silicone
Sterilized	Ozone
Growth Area per Well	1.9 cm^2
Typical Working Volume per Well	0.7 to 1.2
Glass Thickness	#1.5
Silicone Thickness	0.03 mm

INSTRUCTIONS:

Note: Use these recommendations as guidelines to determine the optimal coating conditions your culture system.

Cautionary Note: The bottom of a 24-well plate can be detached by excessive mechanical force such as centrifugation or direct contact with liquid handling tools (tips, pipettes, etc.).

Remove the *CytoSoft®* product from the protective sleeve in a sterile hood.

1. Prepare extracellular matrix material by neutralizing in amine-free buffer pH 7.4 to 7.9 (such as 1X DPBS). We do not recommend using gelatin as your ECM protein.

Note: Pre-warm the coating solution to approximately room temperature before use.

2. Dilute as needed, and dispense 1 ml of solution into each well to coat the surface.

Note: Recommended dilution for PureCol® Type I collagen is ~ 100 µg/ml (~1:30).
Note: The hydrophobic surface requires larger volumes to cover the surface than do conventional plastic dishes

3. Incubate ECM coated *CytoSoft®* at room temperature, covered for 0.5-1 hour.

4. After incubation, aspirate any remaining material and rinse coated surfaces immediately two times with culture medium or PBS. Leave about 2.5 ml of medium per well to keep surface covered.

Note: Do not allow the *CytoSoft®* surface to become dry once the surface has been wetted.

5. Coated surfaces are ready for use.

6. Standard harvesting procedures used for removing cells from cultureware can be employed for harvesting cells from the *CytoSoft®* product including use of trypsin, Accutase® and non-enzymatic cell detachment solutions.

DISCLAIMER:
This product is for R&D use only and is not intended for human or other uses. Please consult the Materials Safety Date Sheet for information regarding hazards and safe handling practices.

REFERENCES:

Gutierrez, E. & Groisman, A. Measurements of Elastic Moduli of Silicone Gel Substrate with a Micro fluidic Device. *Plos One* 6 (2011).