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1. Description

This product is for research use only.

Components 24-well or 96-well plates, black, transparent fluorcarbon film bottom, with lid, sterile and single packed, 20 pieces per box.

Product	Order no.
Imaging Plate FC (24 well)	130-098-258
Imaging Plate FC (96 well)	130-098-261

Storage Store Imaging Plates FC dry and protected from light at room temperature (19–25 °C). The expiration date is indicated on the box label. Do not use after this date.

1.1 Background information

The Imaging Plates FC have been designed for cell based assays with special requirements for microscopic and photometric analysis. The plate bottom is made from fluorcarbon film and enables rapid control of gas exchange between the ambient air and the cellular microenvironment. The material shows highly reduced intrinsic fluorescence when compared with polystyrene bottoms and shows improved UV light transmission.

1.2 Technical specifications

- Plate material: Polystyrene, black.
- Bottom material: Fluorcarbon film, 25 µm thick, transparent.
- Lid material: Polystyrene, transparent with condensation rings.
- Plate body with low skirt design (distance between skirt bottom and focal plane 0.4 mm). The fluorcarbon film is physically surface treated to promote cell adhesion and spreading. Sensitive cell types may require additional surface coatings.

- Recommended working temperature between –20 °C and +40 °C.
- Recommended working volume per well: 500–1000 µL (24 well) and 100–200 µL (96 well), respectively.
- Dimensions (ANSI/SLAS guideline compliant):

	24-well plate	96-well plate
Length [mm]	127.76	127.76
Width [mm]	85.48	85.48
Height [mm]	15	14.35
Well diameter [mm]	13.2	6
Well-well distance x/y [mm]	18/18	9/9
Distance well center A1 to short side [mm]	18.88	14.38
Distance well center A1 to long side [mm]	15.74	11.24
Distance bottom to focal plane [mm]	0.4	0.4
Bottom thickness [mm]	0.025	0.025

- Optical properties: Refractive index 1.34; Abbe's number 70; >70% light transmission at 240 nm; >90% light transmission between 300–800 nm.
- Gas transfer properties: Oxygen >6300 cm³/(m²*d* bar); CO₂ >7000 cm³/(m²*d* bar)

1.3 Further information

- Imaging Plates FC are compliant with all plate readers and imaging systems which accept ANSI/SLAS plates. For HCA readers and automated microscopes use the given dimensional data for instrument settings/stage programming. The position of wells for 24-well plates are not fixed by ANSI/SLAS standards. For plate readers with standard settings optimal performance should be checked before the first use.
- For high magnification objectives (40× and higher) make sure that the working distance can be adapted to the thin bottom structure (use objectives with correction rings).
- The polystyrene plate body and the adhesive to bond the film limit chemical resistance: avoid prolonged exposure to alcohols, ketones, and acetone to prevent degradation of the plate body or the adhesive.
- Standard immersion media can be used (water, oil, glycerol).

- Chemical resistance criteria: no deformation, no color change, no leakage, no interference with staining procedures.

Chemicals	Conditions	Resistant/ not resistant
Acetone 10%, methanol 90%	1 h, -20 °C	-
Acetone 100%	24 h, RT	-
Acetonitrile	24 h, RT	-
Benzene	1 h, RT	-
DMSO 1-10%	5 d, RT	+
Ethanol 75%	24 h, RT	+
Ethylene glycol	24 h, RT	-
Ethylene oxide	24 h, RT	-
Formaldehyde 3.7%	5 d, RT	+
Glutaraldehyde 1%	5 d, RT	+
Glycerine	5 d, RT	+
Immersion oils	5 d, RT	+
Isopropanol 75%	24 h, RT	+
Ketones	24 h, RT	-
Methanol 90%	24 h, RT	+
Toluene	1 h, RT	-
Triton™ X	24 h, 37 °C	+

RT: room temperature (19-25 °C)

d: day

h: hour

+: resistant

-: not resistant

1.4 Applications

Imaging Plates FC have been designed for cell based assays with fluorescence or luminescence read out technologies and high content analysis (HCA).

Examples are

- (multiplexed) HCA,
- phototoxicity studies (UV light), or
- induced hypoxia studies.

Refer to www.miltenyibiotec.com for all data sheets and protocols. Miltenyi Biotec provides technical support worldwide. Visit www.miltenyibiotec.com/local to find your nearest Miltenyi Biotec contact.

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