

MultiScreen® Cell Culture Trays



Single-Well Tray (Cat. No. MAMC S01 10)
96-Well Tray (Cat. No. MAMC S96 10)

Before beginning experiments, read complete instructions for adding media to tray in the Procedure section below.

Introduction

MultiScreen Cell Culture Trays enhance 96-well membrane-based cell culture by providing a mechanism for basolateral feeding and/or co-culture with either a single-well or 96-well tray. MultiScreen Cell Culture Trays are designed to be used with the following Millipore filter plates:

| Description | Cat. No. |
|---|-------------|
| MultiScreen-MIC, 3 µm, sterile, 10 pk | MAMI C3S 10 |
| MultiScreen-MIC, 5 µm, sterile, 10 pk | MAMI C5S 10 |
| MultiScreen-MIC, 8 µm, sterile, 10 pk | MAMI C8S 10 |
| MultiScreen-HA, 0.45 µm, sterile, 10 pk | MAHA S45 10 |
| MultiScreen-HV, 0.45 µm, non-sterile, 10 pk | MAHV N45 10 |
| MultiScreen-HV, 0.45 µm, non-sterile, 50 pk | MAHV N45 50 |
| MultiScreen-DV, 0.65 µm, non-sterile, 50 pk | MADV N65 50 |
| MultiScreen-BV, 1.2 µm, non-sterile, 50 pk | MABV N12 50 |

These trays facilitate the simultaneous processing of 96 samples and allow media to be provided to the basal side of all wells at once (single-well tray; MAMC S01 10), or different media to each of the 96 basal sides (96-well tray; MAMC S96 10).

- **The single-well tray** (MAMC S01 10) holds the media required to feed all 96 wells simultaneously. The patented design of this tray prevents bacterial contamination of the tray / MultiScreen plate / lid assembly during transport (within a lab) by preventing the media from contacting the external portion of the tray and creating a fluid path back into the media.
- **The 96-well tray** (MAMC S96 10) consists of 96 independent wells that nest with the 96 wells of the filter plate. The patented “tear drop” structure prevents air entrapment under the membrane when a MultiScreen plate is placed into the tray.

MultiScreen Cell Culture Trays are individually wrapped and sterilized, and are provided 10 to a package for both the single-well and the 96-well trays.

Precautions

- Perform all procedures aseptically in a laminar flow hood.
- If the MultiScreen filter plate must be removed from the Cell Culture Tray to replace media on the basolateral side or to sample wells, protect the MultiScreen filter plate by placing it in a separate Cell Culture Tray.
- If using a single-well tray, removing the MultiScreen plate from the tray for media changes can be eliminated by punching out one well of the MultiScreen plate (e.g., A1) and using this opening to pipette media in and out of the tray.

Procedure

Aseptically remove the underdrain from the MultiScreen plate before placing the plate on the Cell Culture Tray.

CAUTION: MultiScreen plates cannot be used on the vacuum manifold after the underdrain has been removed. Without the underdrain, plates cannot retain liquid during incubation, and quantitative transfer to a receiver well cannot be achieved.

For Single-Well Tray

If using the single-well tray, follow the procedures below for suspension or adherent cell cultures.

Suspension Cell Culture

The maximum combined total fluid volume of the single-well tray and the MultiScreen plate is 43.5 mL. The fluid level will equilibrate between the MultiScreen plate and the tray. To maintain the maximum equilibrated volume, add 130 µL of media to each well of the plate and 31 mL to the tray. To maintain 100 µL per well, add 100 µL of media to each well of the plate and 27 mL to the tray.

Adherent Cell Culture

The maximum combined total fluid volume to add to the single-well tray and the MultiScreen plate is 47.2 mL because once the monolayer forms in the well, the fluid level will not equilibrate as rapidly. Therefore, it is possible to culture the established monolayer of cells with 200 µL of media in each well of the plate and 28 mL media in the tray.

For 96-Well Tray

If using a 96-well tray, the maximum recommended fluid volume for each well is 170 µL. When combined with the MultiScreen plate, the maximum combined total fluid volume should not exceed 270 µL per well. Greater fluid volume will result in overflow and leakage.

Pipette 170 µL of reagent, media or cell suspension into each well of the culture tray. Align the wells of the MultiScreen plate and the culture tray and gently lower the plate into the tray. The filters will rest about 2 mm above the bottom of the culture tray. Pipette up to 100 µL of a target cell suspension into each well of the MultiScreen plate. Cover the MultiScreen filter plate with lid for incubation.

Media Volumes – Single-Well Cell Culture Tray and 96-Well MultiScreen Plate

| | MultiScreen Plate Per Well Volume (µL) | Cell Culture Tray Volume (mL) | Maximum Combined Volume (mL) |
|-------------------------|---|----------------------------------|---------------------------------|
| Suspension Cell Culture | 130 | 31 | 43.5 |
| Suspension Cell Culture | 100 | 27 | 36.6 |
| Adherent Cell Culture | 200 | 28 | 47.2 |

Media Volumes – 96-Well Cell Culture Tray and 96-Well MultiScreen Plate

| | MultiScreen Plate Per Well Volume (µL) | Cell Culture Tray Per Well Volume (µL) | Maximum Combined Volume (µL) |
|--------------|---|---|---------------------------------|
| Cell Culture | 100 | 170 | 270 |

Ordering Information

This section lists the catalogue numbers for MultiScreen Cell Culture Trays. See the Technical Assistance section for information about contacting Millipore. You can also buy Millipore products on-line at www.millipore.com/products.

| Description | Cat. No. | Qty/Pk |
|--|-------------|--------|
| Sterile MultiScreen Cell Culture Trays | | |
| Single-well Cell Culture Tray | MAMC S01 10 | 10 |
| 96-well Cell Culture Tray | MAMC S96 10 | 10 |
| Non-sterile MultiScreen Trays | | |
| 96-well Transport Receiver Plate | MATR NPS 50 | 50 |

Technical Assistance

For more information, contact the Millipore office nearest you. In the U.S., call **1-800-MILLIPORE** (1-800-645-5476). Outside the U.S., see your Millipore catalogue for the phone number of the office nearest you or go to our web site at www.millipore.com/offices for up-to-date worldwide contact information. You can also visit the tech service page on our web site at <http://www.millipore.com/techservice>.

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