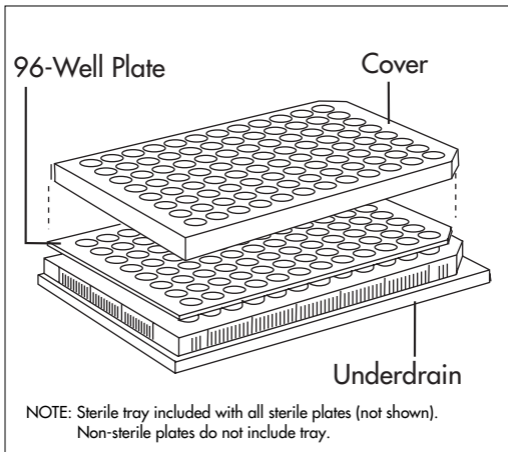


Millipore MultiScreen® Assay System

96-Well Filtration Plate



MILLIPORE

Introduction

The 96-well MultiScreen® plates enable you to filter samples and perform entire procedures, from cell growth to scintillation counting, within the same plate. You can use the plates with the Millipore MultiScreen Assay system or a similar vacuum manifold. The plates come in many membrane types, pore sizes, and plate materials. For example, a plate may have a Durapore membrane with a .45 micron (μm) pore size. It could be sterile or non-sterile and clear or opaque. See the “MultiScreen Ordering Information” section for details on the available plates.

NOTE: Use opaque plates for direct microscintillation counting and flash luminescence. Use solvent resistant plates with > 30% organic solvent. Use these HVPP plates for in-vitro diagnostic (neonatal screening) procedures: MAHV N45 10 or MAHV N45 50. (See “MultiScreen Ordering Information” section for details.)

All sterile and non-sterile plates have a 96-well plate with a membrane sealed to the bottom, a plastic underdrain to prevent cross-contamination between wells, and a plastic top cover. The diagram on the cover points out the plate parts. If you ordered a sterile plate, it comes individually wrapped and includes a sterile tray. The tray fits under the underdrain. This helps maintain plate sterility.

CAUTION: Do not use the manifold on the same bench or table where you operate a vacuum pump, shaker, or mixer. The vibration could disrupt the filtrate transfer process for quantitative collection of filtrate.

Directions

Most protocols and plate types require that you prewet or coat the plate before filtering samples to ensure proper filtration or cell attachment and growth. The “MultiScreen Ordering Information” section lists prewetting requirements. If you need to prewet the plate, see the following section. Otherwise, continue on to the “Filtering Samples” section. (For ELISPOT assays using a plate with an IPVH membrane, prewetting is optional. See literature number TN044 for details.)

Prewetting or Coating Plates

This section describes how to prewet plates with an aqueous or alcohol solution. It also describes how to coat the plate with an extra cellular matrix (ECM) component. The solution you use depends on the plate type and assay. For example, you may need to prewet a non-sterile IP plate with ethanol. A sterile plate (Durapore or CM) may need an ECM coating. (See literature number MM012 for more information.) Do not prewet or coat DP plates.

NOTE: For lymphocytes and suspension cell lines, use Durapore plates. Millipore recommends mixed cellulose esters (HA) plates for all attachment-dependent cells. (HA plates do not usually require coating with a cell adhesion molecule [CAM] or ECM component.) Biopore CM plates are recommended for all cell types.

Before prewetting or coating plates, you need to:

- Place the plate on the manifold and remove the cover. (If sterile, remove the sterile tray before loading the plate.) Then continue on to the prewetting or coating steps you need.

NOTE: Once you prewet the plate, keep it damp before filtering or you must rewet it.

Aqueous Prewet (Sterile or Non-Sterile Plates)

- Add 100 microliter (μL) of starting buffer to each well. Vacuum after 1 minute. Then see the “Filtering Samples” section.

Alcohol Prewet (Sterile or Non-Sterile Plates)

1. Add 100 μL of 70% ethanol to each well. After 5 minutes, apply vacuum.
2. Add 200 μL of starting buffer as a chase and apply vacuum. Then see the “Filtering Samples” section.

ECM Coating (Sterile Plates)

1. Prepare rat tail collagen (RTC) stock (3 mg/mL) in hydrochloric acid (HCl) or acetic acid.
2. Dilute with 1 part collagen stock, 3 parts 60% sterilized ethanol.
3. Add 40–50 μL aseptically to each well and allow to dry in a laminar flow hood. Then see the “Filtering Samples” section. Seed cells at appropriate density. For information on coating with other ECM components, see literature number MM012.

NOTE: You can seal and store dried plates at 4°C for up to four weeks before running samples.

Filtering Samples

The maximum recommended vacuum for all plates except PH and DE is 18" Hg. A higher vacuum level can lead to higher filtrate CV levels. For PH and DE plates, the maximum recommended vacuum is 8" Hg.

1. Remove the plate cover and add solution(s) to the wells.
2. Incubate as the assay requires.
3. Place the plate on the manifold (if not done already). For sterile plates, remove the sterile tray before loading.

CAUTION: Do not remove the plastic underdrain from the plate before filtering samples or you will destroy the plate.

4. Remove the cover (if not done already) and apply vacuum to filter.

CAUTION: Empty wells can cause no flow. You must add fluid to the unused wells or cover them with tape to get flow. Placing tape on all the wells or having the cover on the plate also causes no flow.

5. Remove the plastic underdrain only if you need to punch the samples out of the filtration plate. The plates are designed to fit the Millipore Multiple Punch Assembly only.

CAUTION: Keep your hands off the bottom of the plate to avoid contaminating the samples.

For more information, see the user guide that came with the Millipore MultiScreen Assay system or Multiple Punch Assembly.

MultiScreen Ordering Information

This section lists ordering information for low protein and nucleic acid binding plates, high protein or nucleic acid binding plates, and special filter papers.

NOTE: New plates (including black plates) are continually introduced for new assay techniques. Call your nearest Millipore Technical Service Department for more information.

Low Protein and Nucleic Acid Binding Plates

Membrane	Pore Size	Plate	Prewet	Description	Qty/Pk	Catalogue No.	
GVPP	0.22 µm	Clear	Aqueous solution	Durapore®; Non-sterile	50	MAGV N22 50	
					10	MAGV N22 10	
		"	"	Aqueous solution/ ECM coating	Durapore; Sterile	10	MAGV S22 10
"	"	Opaque	Aqueous solution	Durapore; Non-sterile	50	MAGV NOB 50	
					10	MAGV NOB 10	
HVPP	0.45 µm	Clear	Aqueous solution	Durapore; Non-sterile, Opaque	50	MAHV N45 50	
					10	MAHV N45 10	
		"	"	Aqueous solution/ ECM coating	Durapore; Sterile	10	MAHV S45 10
						50	MHVB N45 50
"	"	Opaque	Aqueous solution	Durapore; Non-sterile	50	MHVB N45 50	
					10	MHVB S45 10	
DVPP	0.65 µm	Clear	Aqueous solution	Durapore; Non-sterile	50	MADV N65 50	
					10	MADV N65 10	
		"	"	Aqueous solution/ ECM coating	Durapore; Sterile	10	MADV S65 10
						50	MADV NOB 50
"	"	Opaque	Aqueous solution	Durapore; Non-sterile	10	MADV NOB 10	
					50	MADV NOB 10	
DP	0.65 µm	Clear	Do not prewet	modified Durapore; Non-sterile for protease and other solution assays	50	MADP N65 50	
					10	MADP N65 10	
		"	"	Opaque	"	50	MADP NOB 50
						10	MADP NOB 10
BV	1.2 µm	Clear	Aqueous solution	Durapore	50	MABV N12 50	
					10	MABV N12 50	
		"	"	Aqueous solution/ ECM coating	Durapore; Sterile	10	MABV S12 10
						10	MABV NOB 10
CM	0.4 µm	Clear	Aqueous solution/ ECM coating	Biopore™, hydrophilized PTFE; Sterile	10	MACM S45 10	
R1	1 µm	PP	Aqueous or solvent	hydrophilic PTFE; Non-sterile; solvent resistant	50	MAR1 N10 50	
R5	5 µm	"	Aqueous or solvent	hydrophilic PTFE; Non-sterile; solvent resistant	10	MAR1 N10 10	
					50	MAR4 N50 50	
LCR	0.4 µm	"	Aqueous or solvent	solvent resistant hydrophilic PTFE; Non-sterile; solvent resistant	10	MAR4 N50 10	
					50	MAR4 N04 50	
					10	MAR4 N04 10	

High Protein or Nucleic Acid Binding Plates

Membrane	Pore Size	Plate	Prewet	Description	Qty/Pk	Catalogue No.
VM	0.05 μm	Clear	Aqueous solution	mixed cellulose esters; Non-sterile, binds protein, for genomic DNA dialysis	50	MAVM N05 50
					10	MAVM N05 10
HATF	0.45 μm	Clear	Aqueous solution	mixed cellulose esters; Non-sterile, Triton®-free, binds protein and nucleic acids	50	MAHA N45 50
					10	MAHA N45 10
"	"	"	"	Sterile, for cell culture and ELISPOT assays	10	MAHA S45 10
"	"	Opaque	"	mixed cellulose esters; Non-sterile, binds protein and nucleic acids	50	MHAB N45 50
					10	MHAB N45 10
"	"	"	"	Sterile, for cell culture and ELISPOT assays	10	MHAB S45 10
IPVH	"	Clear	Ethanol	Immobilon-P; Non-sterile, high-protein-binding, hydrophobic	50	MAIP N45 50
					10	MAIP N45 10
"	"	"	"	Immobilon-P; Sterile, high-protein-binding, for ELISPOT assays	10	MAIP S45 10
"	"	Opaque	"	Immobilon-P; Non-sterile, high-protein-binding, hydrophobic	50	MAIP N0B 50
					10	MAIP N0B 10
NP	0.2 μm	Opaque	Aqueous solution	Immobilon-NC ^{Pure} ; Non-sterile, pure nitrocellulose, for nucleic acid binding	50	MANP N0B 50
					10	MANP N0B 10
N4	0.4 μm	Opaque	Aqueous solution	Nylon; Non-sterile, for nucleic acid binding	10	Call Tech. Service

Special Filter Papers

Membrane	Pore Size	Plate	Prewet	Description	Qty/Pk	Catalogue No.
FC	1.2 μm	Opaque	Aqueous solution	Glass fiber C; Non-sterile pure borosilicate glass over 0.65 μm Durapore	50	MAFC NOB 50
					10	MAFC NOB 10
FB	1.0 μm	Opaque	Aqueous solution	Glass fiber B; Non-sterile pure borosilicate glass over 0.65 μm Durapore	50	MAFB NOB 50
					10	MAFB NOB 10
BC	1.2 μm	Clear	Aqueous solution	Glass fiber C; Non-sterile pure borosilicate glass over 1.2 μm Durapore, for phage preps	50	MABC N12 50
					10	MABC N12 10
PH		Opaque	Aqueous solution	Phosphocellulose paper; Non-sterile negatively charged filter paper over 0.65 μm Durapore	50	MAPH NOB 50
					10	MAPH NOB 10
DE		Opaque	Aqueous solution	DEAE paper; Non-sterile positively charged filter paper over 0.65 μm Durapore	50	MADE NOB 50
					10	MADE NOB 10
3M		Opaque	Aqueous solution	3MM paper, Non-sterile chromatography paper over 0.65 μm Durapore	10	Call Tech. Service
Nylon	20–100 μm	Clear	Aqueous solution	Nylon mesh	10	Call Tech. Service
Nucleic A		Clear	Aqueous solution	For clearing bacterial lysates	50	MANA NLY 50
					10	MANA NLY 10

Technical Assistance

For more information, call our Technical Service Department toll-free at 1-800-MILLIPORE (1-800-645-5476). Outside of the United States, contact the nearest Millipore office. See the Millipore laboratory catalogue for a complete phone list. Or, look us up on the Internet (<http://www.millipore.com/multiscreen>).

General Limited Warranty

Millipore Corporation ("Millipore") warrants the products manufactured by it against defects in materials and workmanship when used in accordance with the applicable instructions for a period of one year from the date of shipment of the products. **MILLIPORE MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED. THERE IS NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** The warranty provided herein and the data, specifications and descriptions of Millipore products appearing in Millipore's published catalogues and product literature may not be altered except by express written agreement signed by an officer of Millipore. Representations, oral or written, which are inconsistent with this warranty or such publications are not authorized and if given, should not be relied upon.

In the event of a breach of the foregoing warranty, Millipore's sole obligation shall be to repair or replace, at its option, any product or part thereof that proves defective in materials or workmanship within the warranty period, provided the customer notifies Millipore promptly of any such defect. The exclusive remedy provided herein shall not be deemed to have failed of its essential purpose so long as Millipore is willing and able to repair or replace any nonconforming Millipore product or part. **Millipore shall not be liable for consequential, incidental, special or any other indirect damages resulting from economic loss or property damage sustained by any customer from the use of its products.**

Copyright 1994, 1997

Millipore is a registered trademark of Millipore Corporation or an affiliated company. Biopore, Durapore, Immobilon, and MultiScreen are trademarks of Millipore Corporation or an affiliated company.

PF05265, Rev. A, 11/97