

# MICROBIOLOGY SUPPLIES

Membranes for Microbiology – Introduction	18
White Mixed Cellulose Esters	19
Black Mixed Cellulose Esters	20
Green Mixed Cellulose Esters	20
Cellulose Acetate (White)	20
Petri Dishes	21
Presterilized Absorbent Pads	21
Filterceps	21
Culture Media	22
Whirl-Pak® Sampling Bags	22



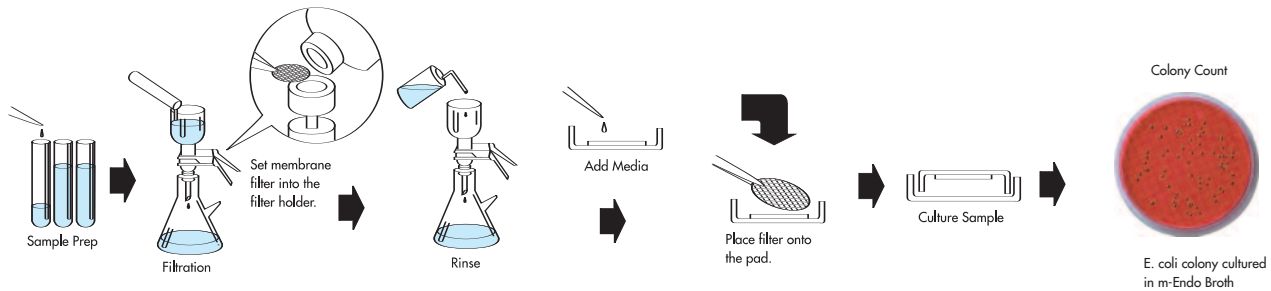
## Membranes for Microbiology – Introduction

- **Made from Mixed Esters of Cellulose (MCE) or Cellulose Acetate:** MCE is a mixture of nitrocellulose and other cellulose esters. MSDS available upon request
- **Available with grid lines:** Contrasting grid lines facilitate counting colonies on the filter surface and are tested to assure freedom from grid line inhibition. 3.1 mm squares represent 1/100 of the filtration area of a 47 mm diameter filter (9.6 cm<sup>2</sup>)
- **Convenient packaging:** Membranes are available individually wrapped for optimum sterility and also in 10-packs
- **Specially tested for microbiology:** All 0.45 µm white gridded membranes are tested for Coliform, Fecal Streptococci and *Serratia marcescens*. All 0.65 µm white gridded membranes are tested for complete retention and optimal recovery of Fecal Coliform and *Saccharomyces cerevisiae*. Black and Green membranes are tested for optimal recovery of yeast and total bacteria. All membranes are also tested for uniform wetting, freedom from grid line inhibition and optimal color reactions on appropriate test media
- **Membrane certification** for individual lot numbers is available on request. Advantec membranes were developed and are manufactured to comply with the provisions of the National Interim Primary Drinking Water Regulations, Guidelines for Establishing Test Procedures for the Analysis of Pollutants, Standard Methods for the Examination of Water and Wastewater and the ASTM

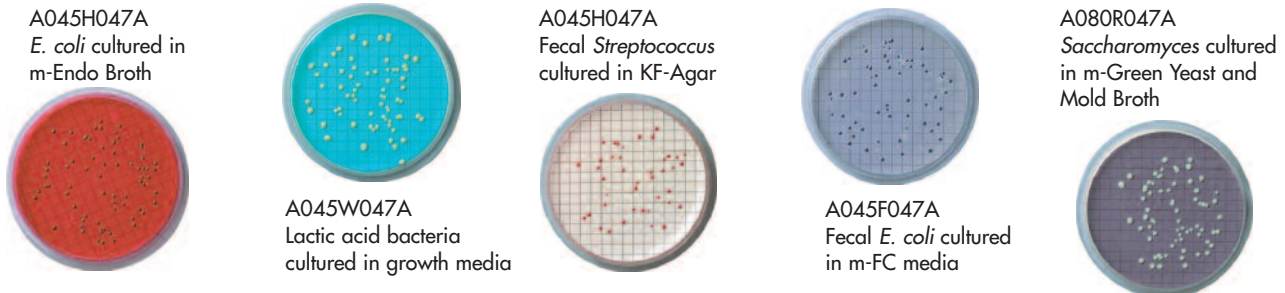
## APPLICATIONS

- **Applications** include microbiological analysis of water, wastewater, pharmaceuticals and beverages

## Sample Filtration and Growth Procedures



## Sample Growth Results

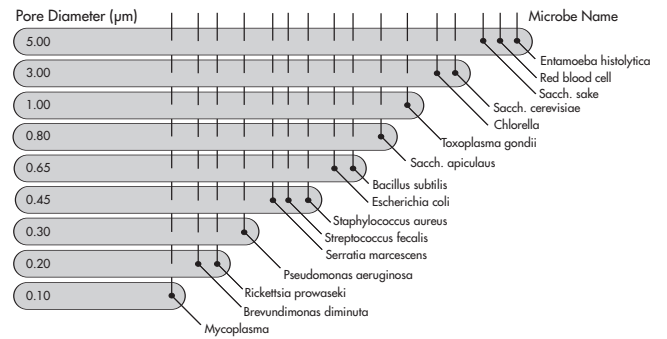


## Recommended Product Compatibility (Diameters in mm)

Membrane	Filter Holder	Petri Dish
47	47	50
82	90	92 or 93
85	90	≥100
137	142	≥150

MF Color	Pore size	Grid Line Color
White	≥0.65 µm	Black
White	≤0.80 µm	Green
Black	0.45, 0.80 µm	Black
Green	0.45, 0.80 µm	Green

## Relationship of Pore Size and Microbe Retention to Membrane Filters



## White Mixed Cellulose Esters

- **Standard** for microbiological analysis of water, wastewater, and beverages
- **Convenient:** Available in individual or 10-pack, presterilized by EtO or autoclavable

Available in plain or gridded circles, package of 100 (except where noted)

Pore Size (µm)	Diameter (mm)	Plain or Grid	Individual Pack with pad (presterilized)	Individual Pack without pad (presterilized)	Multipack 10 packs of 10 membranes per pack with pad (presterilized)	Multipack 20 packs of 10 membranes per pack without pad (presterilized)	Multipack 10 packs of 10 membranes per pack with pad (autoclavable)	
0.20	47	Plain	-	A020G047A	A020C047A	-	A020S047A	
		Grid	A020F047A	A020H047A	-	-	-	
0.45	47	Plain	A045E047A	A045G047A	A045C047A	-	A045S047A	
		Plain-HE	-	A045G047J	-	-	-	
		Grid	A045F047A	A045H047A A045H047Y (200/pk)	A045D047A	A045D047Y	A045T047A	
		Grid-HE	-	A045H047W (1000/pk)	A045H047K	-	-	
	50	Plain	-	A045G050A	-	-	-	
		Grid	-	A045H050A	-	-	-	
	82	Grid	-	A045H082A	-	-	-	
	85	Grid	-	A045H085A	-	-	-	
	0.65	47	Plain	-	A065G047A	-	-	-
			Grid	A065F047A	A065H047A	-	-	-
0.8	47	Plain	-	A080G047A	-	-	-	
		Grid	A080F047A	A080H047A	-	-	-	
1.0	47	Grid	-	A100H047A	-	-	-	
3.0	50	Plain	-	A300G050A	-	-	-	

### Black Mixed Cellulose Esters – Sterile

- **Maximum** contrast between colonies and the filter without counterstaining
- **Applications:** Use to enumerate yeast and bacteria in carbonated beverages, wines and water

Available in plain or gridded circles, package of 100

Pore Size (µm)	Diameter (mm)	Plain or Grid	Individual Pack with pad	Individual Pack without pad
0.45	47	Plain	-	A045Q047A
		Grid	A045M047A	A045R047A
	70	Grid	-	A045R070A
0.80	47	Plain	-	A080Q047A
		Grid	A080M047A	A080R047A

### Green Mixed Cellulose Esters – Sterile

- **Pale green background** enables viewing of black, white, and colorless particles on one filter
- **Minimizes eye fatigue**

Available in gridded 47 mm circles, package of 100

Pore Size (µm)	Diameter (mm)	Individual Pack without pad
0.45	47	A045W047A

### Cellulose Acetate (White) – Sterile

- **Lower protein binding** (relative to MCE)
- **Improved solvent resistance** to low molecular weight alcohols (relative to MCE)
- **Application:** May enhance recovery of fastidious gram positive organisms in culture

Available in plain circles, package of 100

Pore Size (µm)	Diameter (mm)	Individual Pack without pad
0.20	47	C020G047A
0.45	47	C045G047A
	82	C045G082A
	85	C045G085A

### Petri Dishes

- **Polystyrene dishes** suitable for culturing microorganisms on 47 mm diameter membrane filters
- **Convenient:** Snug fit prevents drying during incubation. Squared edges and a raised ridge for ease of handling and secure stacking
- **Sterile:** sterilized by gamma irradiation (50 x 11) or by EtO (larger sizes)
- **Standard sizing:** 50 x 11 mm polystyrene dishes fit all commercially available aluminum block incubators
- **Available with or without pad:** 47 mm absorbent cellulose pad (0.85 ± 0.17 mm thick, absorbs 1.8-2.2 mL liquid)
- **Manufacturer's certification of compliance** available upon request



Petri dishes

Model	Description	100/pack (5 sleeves of 20)		500/pack (Cube) (25 sleeves of 20)	
		Catalog No.	Weight	Catalog No.	Weight
PD-1	Sterile Petri Dishes	800100	2 lbs	800500	10 lbs
PD-2	Sterile Petri Dishes with Pads	800101	2.2 lbs	800501	11 lbs

### Presterilized Absorbent Pads

- **Cellulose pads:** 47 mm plain white circles fit into standard petri dishes
- **Routinely tested** for absorption of 1.8 – 2.2 mL of Endo media, pH neutral
- **Convenient Packaging:** 100 individual presterilized packages per box

	Catalog No.
Box of 100 individual sterile packages	B200G047A



Presterilized Absorbent Pads

### Filterceps

- **Forceps** of polished type 304 stainless steel are ideally designed for handling membranes
- **Tips are beveled and unserrated** to minimize the risk of damaging membrane filters
- **Non-slip handle** allows Filterceps to be held securely and flamed without risk of burning one's fingers

	Length	Weight	Catalog No.
Filterceps	4.5 inches	14 g (0.5 oz)	800000



Filterceps

## Culture Media

- **Applications:** Used with membrane filters to culture bacteria, yeasts, and molds
- **Available Ready-to-Use:** 2 mL ampoules contain enough media to saturate one standard absorbent pad in a petri dish. 50 mL bottles contain enough media for 25 tests
- **Sterile:** Bottles can be aseptically opened and closed repeatedly. Single use ampoules assure sterility
- **High Quality:** Each product is lot tested and certified to comply with established test criteria. Quality certificates are included with each shipment and packages are clearly marked with an expiration date



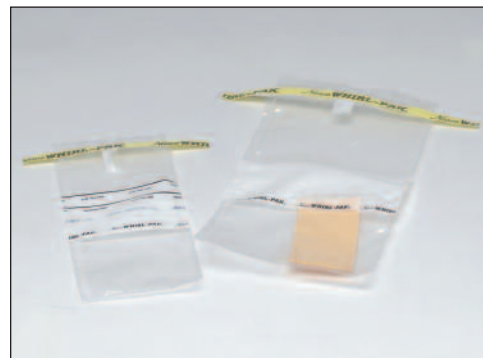
Sterile media is available in 2 mL ampoules and 50 mL bottles.

Ready to Use Media		Catalog No.	
Media	Target Organism	2 mL Ampoules (50/box)	50 mL Bottles (8/box)
m-Endo	Total Coliform Bacteria, Water	COLI200	COLI50MLPK
m-FC	Fecal Coliform Bacteria	MFC200	-
m-FC with Rosolic Acid	Fecal Coliform Bacteria	MFCR200	-
m-PA	<i>Pseudomonas aeruginosa</i>	MPA200	-
m-TGE	Total Bacteria	TCM200	-
m-TGE with indicator	Total Bacteria	TCI200	-
m-Green Yeast and Mold	Yeast and Mold, pH 4.6	YMM200	-
m-HPC	Heterotrophic organisms with indicators	MHPC200	-

## Whirl-Pak® Sampling Bags

- **Sterile** sampling bags for collecting and transporting liquid, semi-solid, and solid samples
- **Composition:** Blended polyethylene contains ethyl vinyl acetate for transparency and strength
- **Convenient:** Bags close easily and securely by whirling or folding, use puncture-proof tabs to seal
- **Approved** by the FDA and USDA for food sampling

Capacity		Dimensions	Qty/box	Catalog No.
Ounces	mL			
4	120	3 x 7.25 inches	500	WP006ZWS
18	540	4.5 x 9 inches	500	WP018ZWS
27	810	5 x 12 inches	500	WP027ZWS
<b>Whirl-Pak with Sponge: sterile sponge free from growth inhibitors</b>				
18	540	4.5 x 9 inches	100	WP1254WSP
<b>ThioBag®: contains a sodium thiosulfate tablet for use when sampling chlorinated water</b>				
4	120	3 x 7.25 inches	100	WP100MWT



Sterile Whirl-Pak sampling bags.