Data Sheet

Microfil® Filtration System

An easy to use, fast and accurate system for the routine microbiological analysis of your beverages and drinking water.

The Microfil system is a simple, low-cost and reliable solution for routine testing of raw materials, beverages and water for microbiological contamination. These tests are an important part of your quality assurance program. The standard testing method used in laboratories around the world for microbial analysis of fluids is membrane filtration. However, this method is technically demanding and requires time-consuming preparation, assembly and sterilization of the test apparatus.

With Millipore's Microfil filtration system, you will eliminate time-consuming steps, equipment set-up, waste, and autoclaving while improving the productivity of your lab. This cost-effective system uses presterilized, ready-to-use funnels and membranes on a patented filtration support.

Minimize Clean-Up, Assembly and Autoclaving

Ready-to-use, ultra-thin 100 or 250 mL Microfil funnels eliminate the need for washing and sterilizing after each test and make equipment handling easy. Packaged in convenient stacks of 25 or 30, the funnels are removed as needed from the custom designed funnel dispenser. Such vertical stacking of the funnels also optimizes lab space.

A range of pre-sterilized 47 mm diameter gridded membranes are available with the Microfil funnels. Each membrane is individually sealed in pleated band (EZ-Pak® membranes) or in peel back envelopes (S-Pak™ membranes).

Easy-to-Use with No Clamps and No O-Rings

The push-fit design of the Microfil funnels seals tightly to manifold supports without the need for clamps or O-rings. This ensures leak-free operation and uniform microorganism recoveries.

Unique Membrane Lifting Device

The membrane lifting device automatically breaks residual vacuum and lifts the membrane for easy removal with forceps. This aids in removing the membrane from the support after filtration, also reducing user-related contamination during the membrane transfer process.

Consistent Recoveries

Unlike with conventional filter holders, incomplete sealing at the membrane/funnel interface is eliminated resulting in uniform recovery of organisms. The smooth hydrophobic funnel surface repels sample residues and microorganisms to ensure that any microorganisms in your sample are collected on the membrane and not lost on the funnels walls. Pleating and distortion of the wet membrane due to expansion is avoided by the unique design of the support. As a result, uniform contact between the membrane and the medium is achieved.

Faster Filtration Rates

Due to the unique membrane support, filtration rates with the Microfil system are faster when compared to traditional filtration equipment.

Benefits of the Microfil Filtration System

- No Preparation
- No Washing
- No Autoclaving
- No Clamps
- No Breakage
- No Filter Wrinkling
- No By-pass

PROCESSING AN AQUEOUS SAMPLE USING THE MICROFIL SYSTEM CAN BE DONE IN 7 SIMPLE STEPS:

Step 1

Sanitize the Microfil support prior to processing each sample. Recommended methods include the use of alcohol or a quick flaming of the Microfil support steel surface.

Step 2

Place either an EZ-Pak or S-Pak membrane filter on the Microfil support.

Step 3

Dispense a Microfil funnel using the specially designed dispenser.

Step 4

Place the Microfil funnel on the support and push down to fix it firmly in place.

Step 5

Pour the sample into the funnel and filter by applying vacuum.

The unique sealing lip of the Microfil funnel avoids the risk of membrane by-pass by microorganisms. The clipping **(1)** holds the funnel firmly on the filtration support. After filtration, the funnel is removed and the membrane is lifted together with the membrane support **(2)** by simply pressing the lever **(3)**. The membrane can now be conveniently removed from the support using forceps.

Step 6

Remove the funnel. Simply press the lever to lift the membrane off the support for easy removal with forceps. Residual vacuum is broken at the same time.

Step 7

Place the membrane filter into a Petri dish containing solid or liquid medium and incubate.

REGULATORY REQUIREMENTS

The Microfil method has been established with reference to International Standards allowing biological analysis to be conducted under optimum conditions and conforms to International Standards for drinking water and mineral water.

ISO 7704 – Water Quality – Evaluation of membrane filters used for microbiological analysis – 1st edition 1985

Standard Methods for the Examination of Water and Waste Water 21st edition 2005

World Health Organization - Guidelines for drinking water quality, Geneva 1993

MICROFIL METHOD BENEFITS

- Use of 47 mm gridded presterilized membranes
- 100 mL and 250 mL funnels for drinking water and mineral water analysis
- Hydrophobic funnel surfaces for improved recovery
- Smooth interior funnel surfaces with no scratches
- Unique lip seal to prevent membrane by-pass
- Food-contact-polymer funnels, free from agents that may inhibit bacterial growth
- Disposable funnels eliminate decontamination by flaming or use of alcohol
- Recyclable plastic funnel material that allows for greater environmental protection
- 0.45 µm membranes are certified in accordance with Standard Methods for coliform analysis

ORDERING INFORMATION

150 Funnels and 150 S-Pak Membranes

Each box contains 6 x 25 (100 mL) or 5 x 30 (250 mL) sterilized Microfil funnels and 150 individually packed, sterilized 47 mm diameter gridded S-Pak membranes, available with the following pore sizes and colors:

Membrane Description	100 mL Funnels	250 mL Funnels
0.2 µm white, gridded	MIGSWG100	MIGSWG250
0.45 µm white, gridded	MIHAWG100	MIHAWG250
0.45 µm white, plain	MIHVWP100	N/A
0.45 µm black, gridded	MIHABG100	MIHABG250
0.7 µm white, gridded	MIHCWG100	MIHCWG250
0.8 µm white, gridded	MIAAWG100	MIAAWG250
1.2 µm white, gridded	MIRAWG100	MIRAWG250

150 Funnels and 150 EZ-Pak Membranes

Each box contains 6 x 25 (100 mL) or 5 x 30 (250 mL) sterilized Microfil funnels and a band of 150 individually packed, sterilized 47 mm diameter gridded EZ-Pak membranes, available with the following pore sizes and colors:

Membrane Description	100 mL Funnels	250 mL Funnels
0.2 µm white gridded	MZGSWG101	N/A
0.45 µm white, gridded	MZHAWG101	MZHAWG251
0.45 µm black, gridded	MZHABG101	MZHABG251
0.8 µm white, gridded	MZAAWG101	MZAAWG251
0.8 µm black, gridded	MZAABG101	N/A

Equipment

Description (1/Pk)	Catalogue No.
3-Position Vacuum Manifold, complete with Microfil supports	MIAC03P01
1-Position Vacuum Manifold, complete with Microfil supports	MIAC01P01
Microfil Support with integrated valve 11/4" NPTMI	MIAC01401
Microfil Funnel Dispenser, for use with 100 mL funnels	MIACFD101
Microfil Funnel Dispenser, for use with 250 mL funnels	MIACFD201
EZ-Pak dispenser	EZDISP001
Millipore vacuum pump	MXPPUMP01
Microfil pump head for Millipore vacuum pump	MCLHEAD01
Microfil Hand Vacuum Pump, for use with single-position stand	MIACHVP01

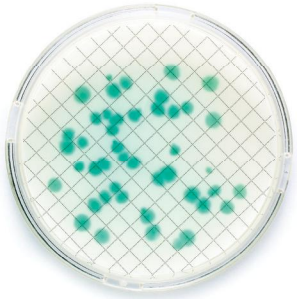
Petri Dishes

47 mm Petri Dishes, packed in sleeves of 25 dishes. Available with or without cellulose pad.

Description (1/Pk)	Qty/Pk	Catalogue No.
Petri Dish without pad	150	PD2004700
Petri Dish without pad	600	PD2004705
Petri Dish with pad	150	PD20047S0
Petri Dish with pad	600	PD20047S5
10 canisters of 100 absorbent pads	1000	AP10045S0
1 pad dispenser and 2 pad canisters	200 pads & 1 dispenser	AP10045S1

Culture Media

You will find the full range of Millipore culture media (including broth and dehydrated media) in a separate brochure or in the Millipore Process Monitoring Tools Catalogue. Both are available upon request.



MILLIPORE™

www.millipore.com/offices

ADVANCING LIFE SCIENCE TOGETHER™
Research. Development. Production.

Lit. No. DS1047EN00 Rev. A Printed in the USA. 05/08 BP GEN-08-00177

TO PLACE AN ORDER OR RECEIVE TECHNICAL ASSISTANCE

For additional information call your nearest Millipore office:

In the U.S. and Canada, call toll-free
1-800-MILLIPORE (1-800-645-5476)

In the U.S., Canada and Puerto Rico, fax orders to
1-800-MILLIFX (1-800-645-5439)

Outside of North America contact your local office.To find the office nearest you: www.millipore.com/offices

Internet: **www.millipore.com**
Technical Service: **www.millipore.com/techservice**