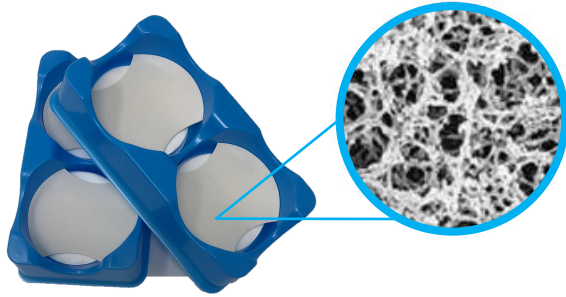


MCE Disc Filters



Membrane filters or membranes are polymer films with specific pore ratings. MCE Membranes retain particles and microorganisms that exceed their pore ratings by acting as a physical barrier and capturing such particles on the surface of the membrane. MCE membranes are available in a variety of polymers, pore sizes, diameters, and surface types. Most membranes can be sterilized by autoclaving. MCE gridded membranes are designed for the recovery and retention of bacteria in microbiological analysis applications. White gridded discs are designed for the recovery and retention of E.Coli bacteria in water/wastewater analysis as well as other microbiological tests. The filters are certified to meet specifications listed in APHA Standard Methods.

Mixed Cellulose ester (MCE) membrane filters are composed of cellulose acetate and cellulose nitrate. Because MCE membrane is biologically inert, it's widely used in analytical and research applications. MCE membrane filter is characterized by smoother and more uniform surface than pure nitrocellulose filter. Also, the color contrast provided by the filter surface facilitates particle detection and minimizes eye fatigue.

Many microbiological techniques include colony counting after incubation as the standard method of quantification. Gridded filters have clearly defined grid lines spaced at 3.1 mm intervals. The special ink used is nontoxic and completely free from bacterial growth inhibitors. White gridded disks are designed for the recovery and retention of E.Coli bacteria in water/wastewater analysis as well as other microbiological tests. Black mixed cellulose esters (MCE) are available plain for automatic colony counting applications, as well as gridded to assist in manual counting procedures. Black MCE membranes provide contrast between residue or cell colors and the filter without having to counter-stain the membrane.

Features **MCE**

High porosity

High protein binding can be blocked by pre-treatment or utilized in application

High purity: Triton-free

Sterile options available for critical applications

Biologically inert with good thermal stability

High degree of internal surface area for greater adsorption of product

Applications MCE

| Application | Color | Pore Size (µm) |
|---|-------|----------------|
| Microdialysis of DNA and proteins | White | 0.1 |
| Sterilizing filtration, bioassays | White | 0.22 |
| Sterilizing filtration, air monitoring, particle monitoring, particle removal, bioassays | White | 0.3 |
| Clarification of aqueous solutions, particle removal and analysis, microbiology analysis | White | 0.45 |
| Fluorescent bacteriological assays, particle monitoring, bioassays | Black | 0.45 |
| Particle monitoring, particle removal, dairy microbiology, retention of yeasts, molds and algae | White | 0.65 |
| Air monitoring, particle monitoring, particle removal, bioassays | White | 0.8 |
| Fluorescent assays, particle monitoring, air monitoring | Black | 0.8 |
| Clarification of aqueous solutions | White | 1 |
| QC of fluid holding tanks, fluid monitoring, air monitoring, particle collection and analysis | White | 3 |
| QC of fluid holding tanks, fluid monitoring, particle collection and analysis | White | 5 |
| QC of fluid holding tanks, fluid monitoring, air monitoring, particle collection and analysis | White | 8 |

Specification

| Pore Size (µm) | Color | Bubble Point (bar) | Water Flow Rate (mL/min/cm ²) | Air Flow Rate (L/min/cm ²) | Porosity |
|----------------|-------|--------------------|---|--|----------|
| 0.1 | White | 14.1 | 1.6 | 0.5 | 74 |
| 0.22 | White | 3.62 | 19 | 2 | 75 |
| 0.45 | White | 2.23 | 60 | 5 | 79 |
| 0.45 | Black | 2.35 | 60 | 5 | 79 |
| 0.65 | White | 1.18 | 135 | 9 | 81 |
| 0.8 | White | 0.95 | 180 | 15 | 82 |
| 0.8 | Black | 1.15 | 180 | 15 | 82 |
| 1 | White | 0.77 | 270 | 20 | 82 |
| 3 | White | 0.69 | 320 | 28 | 83 |
| 5 | White | 0.56 | 560 | 30 | 84 |
| 8 | White | 0.4 | 600 | 63 | 84 |

MCE Disc Filters

| Part Number | Description |
|--------------|---|
| MCE-022-2500 | Membran Filter MCE (0.22µm)25 mm (200/pk) |
| MCE-022-3700 | Membran Filter MCE (0.22µm)37 mm (200/pk) |
| MCE-022-4700 | Membran Filter MCE (0.22µm)47 mm (200/pk) |
| MCE-022-9000 | Membran Filter MCE (0.22µm)90 mm (100/pk) |
| MCE-022-0142 | Membran Filter MCE (0.22µm)142 mm (50/pk) |
| MCE-045-2500 | Membran Filter MCE (0.45µm)25 mm (200/pk) |
| MCE-045-3700 | Membran Filter MCE (0.45µm)37 mm (200/pk) |
| MCE-045-4700 | Membran Filter MCE (0.45µm)47 mm (200/pk) |
| MCE-045-9000 | Membran Filter MCE (0.45µm)90 mm (100/pk) |
| MCE-045-0142 | Membran Filter MCE (0.45µm)142 mm (50/pk) |
| MCE-08-2500 | Membran Filter MCE (0.8µm)25 mm (200/pk) |
| MCE-08-3700 | Membran Filter MCE (0.8µm)37 mm (200/pk) |
| MCE-08-4700 | Membran Filter MCE (0.8µm)47 mm (200/pk) |
| MCE-08-9000 | Membran Filter MCE (0.8µm)90 mm (100/pk) |
| MCE-08-0142 | Membran Filter MCE (0.8µm)142 mm (50/pk) |
| MCE-10-2500 | Membran Filter MCE (1µm)25 mm (200/pk) |
| MCE-10-3700 | Membran Filter MCE (1µm)37 mm (200/pk) |
| MCE-10-4700 | Membran Filter MCE (1µm)47 mm (200/pk) |
| MCE-10-9000 | Membran Filter MCE (1µm)90 mm (100/pk) |
| MCE-10-0142 | Membran Filter MCE (1µm)142 mm (50/pk) |

Table 3.1. MCE Disc Filters part numbers.