

Cellulose Nitrate Membrane Disc Filters for Filtration, Sterility Testing and Microbiology

Aqueous solutions need to be filtered to achieve sterile/contamination-free filtrate in quality control labs in pharmaceutical, beverages, micro-electronics and water testing industries to meet either regulatory or other quality requirements at various stages of product acceptance, manufacture and/or release. Various aqueous solutions are also tested for microbial contamination (bacteria, yeast etc.).

Membrane Filtration technique has been used since long for this. **mdi** offers a range of 47mm Cellulose Nitrate Membrane Disc Filters for different sterility testing and microbiological analysis. These filters are validated for the key performance parameters such as retention efficiency, microbial recovery, biological inertness, heat resistance, and water flow rates and undergo strict quality control regimen which ensures consistency and reliability.

CN	High throughput membranes for sterility testing, sterile filtration, and Bio-burden reduction
CN-S	Pre-sterilized High throughput membranes for sterility testing, sterile filtration, and Bio-burden reduction
EHCN	Membranes with hydrophobic edge for sterility testing of antibiotics and drugs containing bacteriostats
EHCN-S	Pre-sterilized membranes with hydrophobic edge for sterility testing of antibiotics and drugs containing bacteriostats
GCN-S	Pre-sterilized, individually pouch-packed, grid-marked membranes for water microbiology, using non-inhibiting ink
RGCN-S	Pre-sterilized, grid-marked Membranes for water microbiology, in reel form, using non-inhibiting ink,

Application

mdi filters for microbiological analysis are specially designed for sterility testing and water microbiology in process industries such as pharmaceuticals and food and beverages, and in microbiology laboratories in water treatment plants. These filters also find extensive use in life sciences research laboratories for sterile filtration of culture media and other heat labile materials.

Special Features

- ◆ Hydrophilic
- ◆ Non-media migrating
- ◆ Greater reliability
- ◆ High flow rates
- ◆ Biologically inert
- ◆ Produced and packed under Class 10,000 (ISO 7) Clean Room areas
- ◆ Heat sealed pouch (for presterilized variants)

Cellulose Nitrate Membranes

Type CN and CN-S



mdi offers 47 mm diameter Cellulose Nitrate membrane disc filters Type CN (non-sterile) and CN-S (pre-sterilized). These disc filters are used for sample preparation, filtration and microbiological studies.

The CN membrane disc filters are offered in a pack of 100 units in a plastic tray. These filters can be autoclaved and used for the specific application.

mdi CN-S membrane disc filters are used especially in sterility testing and water/product microbiology. These are individually packed in pouches which can be peeled off easily to take out the membrane for use. The pouches have lot number and expiry information printed.

Specifications

Pore Size

0.2µm

0.45µm

Diameter

47mm

Integrity Test (Bubble Point)

0.2µm : ≥ 50 psi (with DI Water)

0.45µm : ≥ 32 psi (with DI Water)

Retention Efficiency

0.2µm : LRV>7 for *Brevundimonas diminuta*

0.45µm : LRV>7 for *Serratia marcescens*

Sterilization

Type CN: Autoclavable at 121 °C for 30 minutes

Type CN-S: EO Sterilized

Maximum Operating Temperature

80°C Continuous

Maximum Operating Pressure

5Kg/cm²

Oxidizable Matter

Passes as per USP

Water Flow Rates

Pore Size	Water Flow Rates @ ▲ P=10psi (0.70 Kg/cm ²), 27 °C
0.2µm	20ml/min/cm ²
0.45µm	45ml/min/cm ²

Ordering Information

Type		Size		Pore Size		XX	XX	Sterility		Pack Size	
	Code		Code		Code				Code		Code
CN	CNXX	47 mm	09	0.2 µm	01			Non Sterile	1	100	04
				0.45 µm	02			EO Sterilized	2		

EXAMPLE: CNXX 09 02 XX XX 1 04

Edge Hydrophobic Cellulose Nitrate Membranes Type EHCN and EHCN-S



mdi EHCN Membranes are used for sterility testing of antibiotics and drugs containing bacteriostats. The membranes have a 6 mm peripheral hydrophobic rim, and remaining inner portion of the membrane is hydrophilic.

The Hydrophobic edge does not allow drug to seep under the rim of the filter holder. This ensures complete removal of the drug during flushing so that growth of any micro-organisms which have been retained on the membrane is not inhibited due to the residual drug, improving sensitivity and reliability of test.

The non-sterile **mdi** EHCN membranes are offered in a pack of 100 numbers in specially designed plastic trays and can be autoclaved for use.

mdi EHCN-S membranes (pre-sterilized) come individually packed in pouches. The pouches have the lot number and expiry date information printed. The membrane disc filters can be removed from the pouches and used directly.

Specifications

Pore Size

0.45µm

Diameter

47mm

Bubble Point

≥ 32 psi (2.25 Kg/cm²) with water

Water Flow Rate

≥ 45ml/min/cm² @ 0.70 Kg/cm² @ 27 °C

Retention Efficiency

0.45µm : LRV>7 for *Serratia marcescens*

Sterilization

Type EHCN: Autoclavable at 121 °C for 30 minutes

Type EHCN-S: EO Sterilized

Validation

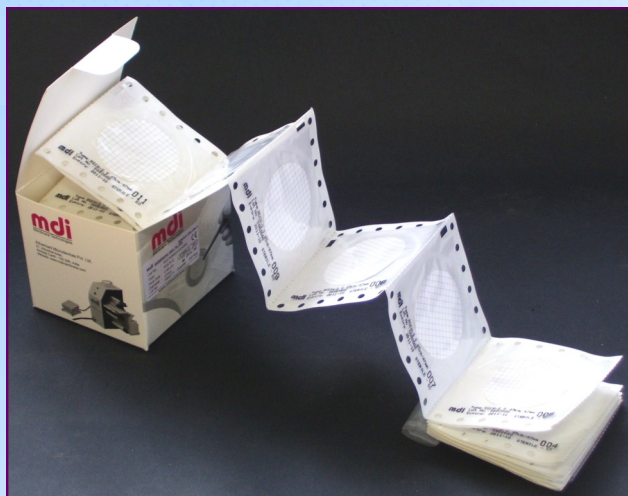
These disc filters are validated through microbial tests to confirm non-inhibitory effect of the hydrophobic rim.

Ordering Information

Type		Size		Pore Size		XX	XX	Sterility		Pack Size	
	Code		Code		Code				Code		Code
EHCN	EHCN	47 mm	09	0.45 µm	02			Non Sterile	1	100	04
								EO Sterilized	2		

EXAMPLE: EHCN 09 02 XX XX 2 04

Grid-Marked Cellulose Nitrate Membranes Type GCN-S and RGCN-S



mdi offers two types of 47 mm diameter Grid Marked, Pre-sterilized Cellulose Nitrate (CN) membrane disc filters namely GCN-S and RGCN-S. These are sterile-pouch-packed with the lot number and serial number identification on the pouches.

mdi GCN-S disc filters are packed in individual pouches made of medical grade sterilization paper and clear transparent plastic film. These are provided with peeling notch for easy and convenient unwrap by hand.

mdi RGCN-S disc filters are packed in similar pouches as GCN-S. These however, are offered in the form of reel for use with automated systems. The main advantage here is that membrane is automatically dispensed and the chances of touching of membrane during peeling-off are minimized.

These specially designed reels are compatible with **mdi** Steridisc Dispenser. The reel has round holes and square punches that fit into the roller teeth for its proper movement. The reel width, holes and punches are graduated and are compatible with other automated dispensers available in the industry.

Specifications

Pore Size

0.45µm

Diameter

47mm

Integrity Test (Bubble Point)

≥ 32 psi (with DI Water)

Water Flow Rate

≥ 45ml/min/cm² @ 0.70 Kg/cm² @ 27 °C

Retention Efficiency

0.45µm : LRV>7 Sr. marcescens

Sterilization

EO Sterilized

Maximum Operating Temperature

80°C Continuous

Maximum Operating Pressure

5Kg/ cm²

Oxidizable Matter

Passes as per USP

Validation

These disc filters are validated as per international standards for their suitability and performance.

>> ASTM D 4200-82

Standard Test Method for Evaluating Inhibitory Effect of Ink Grids on Membrane Filters

>> ASTM D 3508-78

Standard Test Method for Evaluating Water Testing Membrane Filters for Fecal Coliform

Ordering Information

Type		Size		Pore Size		XX	XX	Sterility		Pack Size	
	Code		Code		Code				Code		Code
GCN	GCNX	47 mm	09	0.45 µm	02			Non Sterile	1	100	04
RGCN	RGCN							EO Sterilized	2		

EXAMPLE: RGCN 09 02 XX XX 2 04