PALL Laboratory

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Nanosep® MF Centrifugal Device with wwPTFE Membrane

Description

Ideal for particulate removal prior to sample analysis (HPLC, IC, or GC)

- Rapid processing of small-volume samples. Centrifugal devices are simple to use and save on sample preparation time.
- Universal membrane filter. The water wettable hydrophilic polytetrafluoroethylene (wwPTFE) is ideal for aqueous solutions and offers maximum chemical compatibility for aggressive solvents.
- Over 95% typical protein recovery. wwPTFE membrane is a low protein binding membrane. It removes unwanted particulate from samples with high recovery of critical proteins.
- Low extractables. Our HPLC-grade centrifugal devices are certified to be low in UV extractables.
- Low hold-up volume (< 2 µL) makes these devices ideal for expensive samples.
- High g-force ratings. Can be spun at 14,000 x g assuring rapid sample processing.
- Minimizes membrane clogging. G-force impacts the membrane at an angle, sweeping accumulated materials from the surface.
- Leak-free operation. Unique sealing technology assures leak-free operation without the use of O-rings or adhesives that can add extractables.

Applications

Centrifugal devices are very simple to use. The sample to be processed is pipetted into the upper reservoir of the device. The device is placed into the appropriate centrifuge (taking care that the rotor is balanced) and spun. Filtrate can be recovered by removing the lower reservoir of the device and using a pipette or pipette tip to remove the liquid. Retentate can be recovered from the Nanosep MF centrifugal device with wwPTFE membrane simply by pipetting it from the upper reservoir.

- Sample Prep – particulate removal prior to sample analysis (HPLC, UHPLC, IC, or GC)
- Removal of precipitates (metals, polymers, or crystals)
- Isolation of DNA from agarose gel slices
- Removal of cells from media prior to analysis
- Applications requiring maximum filtrate recovery from limited sample volumes

Specifications

Materials of Construction
Upper Housing, Lower Reservoir: Polypropylene
Membrane: wwPTFE (hydrophilic polytetrafluoroethylene)

Pore Size
0.45 µm, 0.2 µm

Effective Filtration Area
0.28 cm^2

Dimensions
Overall Length (fully assembled with cap): 4.5 cm (1.8 in.)

Capacities
Sample Volume: 50 - 500 µL
Filtrate Receiver Volume: 500 µL
Hold-up Volume (membrane/support): < 2 µL

Operating Temperature Range
0 - 40 ºC (32 - 104 ºF)

Maximum Centrifugal Force
14,000 x g

Centrifuge
A rotor is required that accepts 1.5 mL tubes

Performance

Low Protein Binding
The Nanosep MF centrifugal device with wwPTFE contains low protein binding wwPTFE membrane. In analysis of proteinaceous biological samples, nonspecific adsorption of sample to the filtration device is a concern. Low protein adsorption is especially important when small volumes of dilute protein solutions are being filtered. Greater than 95% recovery of proteins from Nanosep MF with wwPTFE devices is typical.

Chemically Resistant
With a base membrane of highly resistant hydrophilic PTFE, Pall Laboratory's wwPTFE membrane is the only membrane for all of your analytical filtration needs.

Chemical Compatibilities	wwPTFE
Acetic acid, glacial	R
Acetone	R
Dimethyl formamide	R
Dimethyl sulfoxide	R
Ethanol	R
Hydrochloric acid (1N)	R
Isopropanol	R
Methanol	R
Methyl ethyl ketone	R
Methyl isobutyl ketone	R

R = Resistant

Test Methods: The data presented in this chart is a compilation of testing by Pall with certain chemicals, manufacturer's data, or compatibility recommendations from the Compass Corrosion Guide, by Kenneth M. Pruett. This data is intended to provide expected results when filtration devices are exposed to chemicals under static conditions for 48 hours at 25 °C, unless otherwise noted. This chart is intended only as a guide. Accuracy cannot be guaranteed. Users should verify chemical compatibility with a specific filter under actual use conditions. Chemical compatibility with a specific filter under actual use conditions is affected by many variables, including temperature, pressure, concentration, purity, and various chemical combinations which prevent complete accuracy.

Ordering Information

VWR Cat. No.	Pall Part No.	Description	Pkg
76308-654	ODPTFE02C34	Nanosep MF with wwPTFE, 0.2 µm	100/pkg
76308-656	ODPTFE02C35	Nanosep MF with wwPTFE, 0.2 µm	500/pkg
76308-658	ODPTFE04C34	Nanosep MF with wwPTFE, 0.45 µm	100/pkg
76308-660	ODPTFE04C35	Nanosep MF with wwPTFE, 0.45 µm	500/pkg

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