

The Optimum Solution Of **Microbiological Filtration Test**



⊙ CDC ⊙ DRUG ⊙ FOOD&DRINKS ⊙ QC ⊙ WATER SUPPLY ⊙ CHEMICAL



Membrane Filtration

Membrane filtration (MF) is an internationally recognized microbiological test or particle pollution standard method. It is made up of filtration device (filtration support , funnel) and oil-free diaphragm vacuum pump. During using this product, place the membrane on the filter head, fixed it tightly by pressing funnel to form an integrated filtration device. Based on the principle of membrane filtration, separate the test liquid from microbe (or required particle material), and retain the microbe or particle material on the membrane, transfer membrane on the culture medium, and lay it into the incubator, then colony count and observe.

Application

- Disease Control: Microbiological test for legionella, the public water and food.
- Pharmaceutical Industries: Microbial limit test and chemical analysis for pharmaceutical water, drugs and raw material.
- Food & Beverage: Bottled water, water in container, beer, beverage and raw material of liquid applied in production process.
- Filtration treatment in chemical, cosmetic, electron industries.
- Quality supervision inspection.
- Water plant, water supply and sewerage.

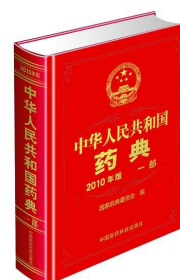
Unique advantages of membrane filtration

- **Reliable Accuracy.** Comparing with general method, it can concentrate bulky sample, improve the accuracy of microbial test.
- **Without interference of growth inhibitor.** Can wash off residue colony growth inhibitor after filtration, such as disinfectant, samples including antiseptic or antibiotics.
- **Quantitative test results.** The visible colony quantity is direct correlation with the volume of test sample.
- **Data file record.** The filter membrane with growth colony can be as the test result directly and permanent archived, traceable of the data.

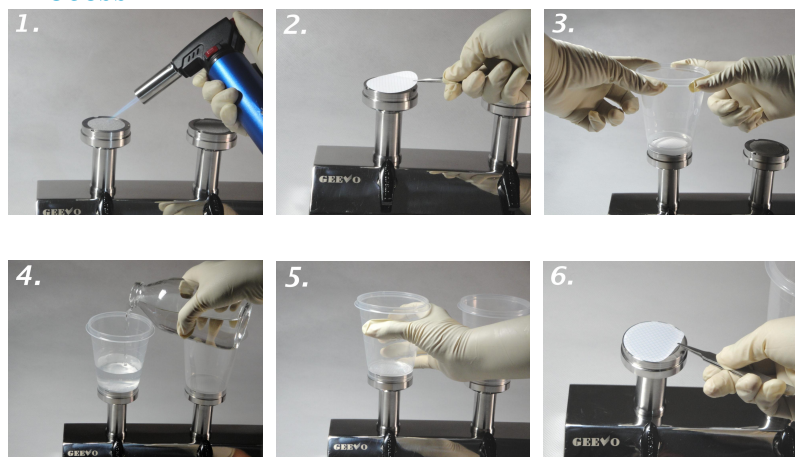
Standard basis

Meet the microbe detection requirements for injection water, pure water and ultrapure water in CP, USP, EP, JP

Meet regulations of relevant institutions, such as China SEPA, AQSIQ, USA EPA and the Ministry of Public Health of China



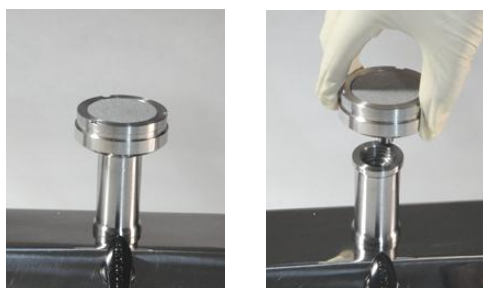
Process



Six Steps

- Step 1 — Sterilize the filter head
- Step 2 — Place membrane
- Step 3 — Put on funnel
- Step 4 — Filter sample
- Step 5 — Take off funnel
- Step 6 — Transfer membrane

Feature



Unique detachable filter head

Connected with threaded fastening and seal ring to guarantee the filter head to be installed and disassembled fast and easily. Unique detachable filter head can ensure its sterile, meanwhile, avoiding membrane secondary pollution (Exclusive patent technology)



High flow filter head

Much bigger effective filter area, it reaches 12.5cm² which is 1.3 times for similar products, improves its filtration rate. Filter 100ml pure water only needs 8 seconds. Meet the demand of 50mm and 47mm filter membranes. Filter disc adopts alloy powder sintering technique. It has good anti-corrosion and liquid distribution uniformity. Special design of recesses, easy to place and take off membrane.



Big arc inside funnel

300ml funnel with 50,100,150,200 and 250ml annular scales, be convenient for observation. Big Inner diameter ensures rapid filtration and high flow. Arc inside design reduces liquid residual, guarantees the accuracy of the test result. Funnel adopts special leakproof structure, easy to install. PP material with high transparency & thermostability, can be sterilized by high temperature and high pressure, cut the cost. Also stainless steel funnel for choice.



C series Membrane filtration system is composed by filtration device, diaphragm vacuum pump and flask. The filtration device made by integrated high quality stainless steel material guarantees stable filtration rate through vacuum pump and flask which forming stable vacuum pressure. Sintering metal membrane support ensure the microbe or particles distribute uniformly on the membrane surface. Quick connect patent technology can be easy for connection and disassemble.

- Filter Head: 1-place, 2-place, 3-place and 6-place
- On the base of the filter device is equipped with a 90 degree valve switch.
- Trapezoidal design of the device. A silicone hose connected with filter head, valve switch and outer row pipe which is hidden in the base. It is convenient to clean the equipment.
- All parts of the filter are made of high temperature resistant materials, which can be sterilized by high pressure and damp heat.
- Filter Funnel: PP Funnel and SS funnel



Technical Parameter

| | | | |
|---|--|--------------------------|--|
| Material of device | SS316 & SS304, Fluorine rubber foot pad | Vacuum pump | PD30A, oil-free diaphragm pump, positive and negative pressure |
| Dimension (mm,W×H) | 105×135. C6:L780, C3:L410, C2:L295, C1:L180 | Pressure regulation | Standard with pressure regulating valve and positive and negative pressure gauge Control system pressure & exhaust function |
| Hose connector | Three-stage toroidal tower-like quick coupling, ø7-ø12 drainage tube | Air exhaust Speed | 30L/min |
| Valve | SS body, alloy handle, 90° | Ultimate pressure | 0.08MPa |
| Filter head | Detachable, threaded connection with filter head holder | Noise | < 50dB |
| Filter disc | Alloy/stainless steel particle sintering process plate | Power | 160W |
| Funnel (PP) | Sterile package, volume:300ml 50、100、150、200、250 annular scale line | Flame sterilization tool | SG51, refill |
| Funnel (SS) | Three:100ml,300ml,500ml | Use time | It can be used for intermittent combustion for 20-40 minutes |
| Membrane diameter | ø47mm, ø50mm | Gas capacity | 18g (Safe burning capacity) |
| Effective filtration area | 12.5cm ² | Filter head | —C6-40 —C3-40 —C2-40 —C1-40 |
| Filtration speed for single filter head | ≤8 秒/100ml(0.45μm membrane) | | |



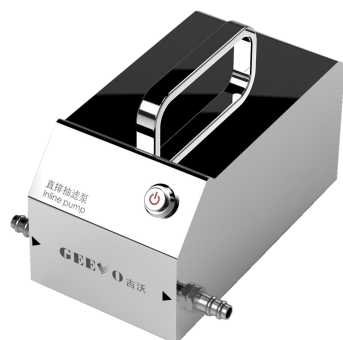
CF series Manifold filtration system is composed by filtration device, diaphragm vacuum pump and flask. Easy designed filtration device made by high quality stainless steel material guarantees stable filtration rate through vacuum pump and flask which forming stable vacuum pressure. Sintering metal membrane support ensure the microbe or particles distribute uniformly on the membrane surface. Economic and practical design lower use-cost.

- Filter Head: 3-place and 6-place
- On the base of the filter device is equipped with a 360 degree round valve switch.
- Simple design of filter support, valve switch is installed directly on the filter holder
- Whole device accept autoclave sterilization
- Support hand handle self - balancing adjustment
- Filter Funnel: PP Funnel and SS funnel



Technical Parameter

| | | | |
|---|--|--------------------------|---|
| Material of device | SS316 & 304 | Vacuum pump | PD20A , oil-free diaphragm pump, Negative pressure |
| Dimension (mm,W×H) | 170×155. CF6:L770, CF3:L425, | Pressure regulation | Standard with pressure regulating valve and negative pressure gauge Control system pressure & exhaust function |
| Hose connector | single-stage toroidal tower-like quick coupling,ø10 drainage tube | Air exhaust Speed | 20L/min |
| Valve | SS body, alloy handle, 360° | Ultimate pressure | 0.08MPa |
| Filter head | Detachable, threaded connection with filter head holder | Noise | < 50dB |
| Filter disc | Alloy/stainless steel particle sintering process plate | Power | 160W |
| Funnel (PP) | Sterile package, volume:300ml 50、100、150、200、250 annular scale line | Flame sterilization tool | SG51, refill |
| Funnel (SS) | Three:100ml,300ml,500ml | Use time | It can be used for intermittent combustion for 20-40 minutes |
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Direct filtration pump is the power resource for microbial test, which work together with filtration device.

The principle of direct filtration pump is same as diaphragm vacuum pump. But it can suction for both gas and liquid, no need buffer bottle. Meanwhile, no need to worry the pump damage, due to full liquid in the buffer bottle. The waste liquid can be exhausted to waster container directly.

Feature

- * Diaphragm vacuum pump for liquid and gas
- * Smart design, Less occupancy
- * No need buffer bottle
- * Easy tube connect
- * DC power supply, safe use
- * Stainless steel polished surface, easy to clean and disinfection*
- * Light button switch, operation intuitively
- * Multi-stage ring pagoda-type drainage pipe interposition, protect the pipe from damage

Technical Parameter

Power supply: 24V, DC, 24W
Max.vacuum degree: 725mmhg
Dimension: 170x93x90(mm)
Flow rate: 1500ml/min
Net weight: 1.6kg



**SMART BODY,
BIG POWER**



C3-40M



C6-40M



PP40 Filter Funnel

- Scale line of funnel: 50, 100, 150, 200 and 250ml.
- Big Inner diameter ensure rapid filtration and high flow. Arc inside design reduces liquid residual
- Special leakproof structure, don't need other seal elements
- Sterile package
accept autoclave sterilization
- 6PCS/PK
- 288PCS/CARTON



SS100-40 SS Filter Funnel SS250-40 SS Filter Funnel SS500-40 SS Filter Funnel

- 100ML, 300ML, 500ML
- Scale line inside
- Integrated processing molding with high quality stainless steel.
- Fast fix with filter head, no need clamp
- Excellent corrosion resistance
- Suit for Cseries
CFseries
CS & CP solvent filters.



SS Filter Funnel Lid

- The seal lid of SS funnel is options.
- can be connected with air filter in the top of lid
- Non-threaded fastening installation, using the vacuum pressure seal produced by the gravity of the lid
- Material: SS & Silicone sealing ring



Sterile Membrane

- MCE disc membrane, For microbial test
- Adopt high quality medical dialysis paper
- Single sterile package.
- Gamma sterilization
- Diameter: ø47mm, ø50mm
- Pore: 0.22μm, 0.45μm
- Material: MCE white
MCE&grided need customized
- Package: Single, 150pcs/box



Tweezer & Loop Stand

- Place tweezer during testing
- Inoculating loop
- Type:3-place,5-place
- Art. No.:Y3, Y5
- Material: stainless steel



Tweezer for Membrane

- Stainless steel, non-magnetic, Good elasticity and corrosion resistance
- Flat toothless design
- Length: 12cm
- Package: 1pc/pk



SG40, SG51 Flame Sterilization Tool

- Smart flame sterilization tool for lab microbial test
- Refilling gas design
- Windproof flame design
- Double Protection design
- Aluminum alloy fuselage, fire port for high temperature ceramic
- Weight: 240g
- Durative burning time: 20-40min
- Max. flame temperature: 1200°C
- The height of flame: Min. 20mm, max. 65mm (22°C)
- L x W x H (mm): 130×66×165



Oil-free Diaphragm Vacuum Pump

- no oil
 - pressure regulating valve
 - Ultimate pressure: 0.08MPa
 - Vacuum: 200mbar
- PD30A**
- Air exhaust Speed: 30L/min
 - L×W×H (mm): 210×160×250
 - N.W.: 6.6Kg
 - Positive and Negative pressure
- PD20A**
- Air exhaust Speed: 20L/min
 - L×W×H (mm): 250×120×255
 - N.W.: 6.5Kg
 - Negative pressure



Infrared Ray Sterilizer

- Adopts infrared heat sterilization principle
- Easy and simple, no pollution, no open fire, not afraid of wind, safe.
- Replace alcohol lamp.
- temperature can reach nearly 900°C, only needs 3 to 4 seconds.
- Advanced intelligent temperature control technology, high temperature control accuracy, avoid heating element full load work.
- can adjusted the angle of head
- Heating port diameter: ø36mm
- Power supply: 220V±20V, 50Hz, 150W
- Net weight: 1.2kg



CS40、CP40 Solution Filter

- Adopts membrane filtration
- Easy to place or take membrane.
- Material of filter head: SS316
- Material of stopper: Silicone
- Diameter of membrane (mm): 47 or 50
- Filtration Area (cm²): 12.5
- Fittings: 1L flask with perforated silicone stopper plug
- Funnel: PP and SS



SCP18 Pen Colony Counter

- Suitable for colony counter during microbiology test
- Pen design, portable for using
- With sound and count number displayed in the LCD screen
- Digital count avoiding human error
- With RESET, pen cap and ON/OFF
- Count range: 0-99999
- Power: button cell
- Size: 155(L)mm×20mm
- Weight: 18g



**Media Dispensing System
AMD Series**

- Three parts: Main control system, rotor system and carrousel.
- About 500 petri dishes per hour
- Filling area protect by UV
- Reduce staff workload, quantitative accuracy
- Big touch screen+ intelligent system

Semi-automated HMD series

- Three dispensing modes: continuous, single and multiple
- Touch screen + key operation
- Flow calibration function
- Dispenser tool

GEEVO Patent:

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ZL201420084729.7

ZL201420084884.9

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