

qpore Centrifugal Filter

» Technical Data Sheet

Description

qpore Centrifugal Filter device can quickly and effectively concentrate and purify biological samples, and currently offers specifications of 0.5ml, 4ml, and 15ml. The unique vertical design and maximum filtration area provide fast sample processing and high sample recovery rate (typically greater than 90% of dilute starting solution), while maintaining a gentle concentration environment to preserve protein activity and conformation. Solute polarization and subsequent fouling of the membrane are minimized by the vertical design, and a physical deadstop in the filter device prevents spinning to dryness and potential sample loss. The wide selection of ultrafiltration molecular weight cut-off (MWCO) devices incorporate PES membrane, which is very low in protein and nucleic acid binding.

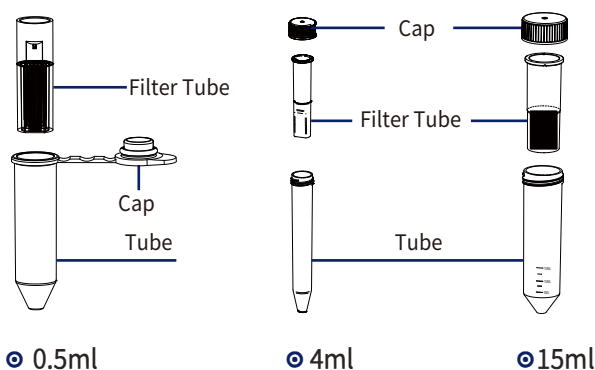


Features

- Precise Retention, low protein adsorption, high recovery rate >90%
- Dual-Sided Vertical Membrane Design. Prevents membrane clogging, ultra-low holdup volume, high centrifugal efficiency
- Excellent Biocompatibility & Safety. Minimal extractables, USP87 certified
- Anti-Dry Filtration Locking Design. Prevents over-centrifugation to ensure stable and reliable experimental results

Structure

The centrifugal filter includes a cap, a filter and a centrifuge tube.



Applications

The filtration process is carried out by depth filter sheets, which are available in a range of porosities, from coarse to fine, and even germ-reducing filtration.

» Ultra-filtration centrifugal filter:

- Concentrate and desalt proteins, nucleic acids
- Buffer exchange or desalting of chromatographic components
- Harvest bio-molecules from culture media
- Virus concentration or isolation
- Coarse separation of bio-molecule mixtures
- Removal of debris and particles from cell lysates

» Micro-filtration centrifugal filter:

- Isolate DNA from agarose gel
- Separation of proteins, oligonucleotides and RNA from polyacrylamide gels
- Sample clarification before HPLC analysis
- Media removal of cells
- Filter biological samples
- Collect and clean processed particles or beads
- Fill chromatographic media for analytical procedures or process development

Specification

Product Cat	0.5ml	4ml	15ml
Filter	PC (Polycarbonate)		SBC (Styrene butadiene copolymer)
Membrane	Polyethersulfone		
Filtrate Tube	Polypropylene		
Filtrate Cap and Liner	Polypropylene		
Effective Filter Area	0.9cm²	3.5cm²	7.2cm²
Filters in Test Tubes (Capped)	Overall lengt (concentrated mode: filter inserted into outertube): 50.3mm Overall lengt (reverse centrifugation: filter inserted backwards into outertube): 46.8mm Diameter: 10.9mm	Overall length 122mm Diameter 17mm	Overall length 117mm Diameter 31mm
Filter	Length: 29.2 mm Diameter: 9.4 mm	Length: 67.5 mm Diameter: 14.5 mm	Length: 75 mm Diameter: 28 mm
Retention Volume	≤5µl	≤20µl	≤30µl
Locking Volume	10-20µl	50-100µl	300µl
Operating Temperature	0-40°C		
pH Range	1-14		
Maximum Centrifugal Force(Ultra Filtration)	14000x g	Swing bucket rotor 4000x g Fixed angle rotor 6000x g	Swing bucket rotor 4000x g (100KD 3000x g) Fixed angle rotor5000x g (100KD 3000x g)
Maximum Centrifugal Force(Micro Filtration)	/	Microfiltration: 10000x g	Microfiltration: 6000x g
Centrifuge Type	Centrifuge standard 1.5 ml conical tubes	Centrifuge standard 15 ml conical tubes	Centrifuge standard 50 ml conical tubes
Sterilization	Non-sterile, can be disinfected and sterilized by filtering 70% ethanol through the equipment.		

Overview

Type	Membrane Material	Sample Capacity	Retention Rating		Sterilization
UF/MF	PES	150	010		N
UF: Ultrafiltration centrifuge filter MF: Microfiltration centrifugal filter	PES	150: 15mL 040: 4mL 005: 0.5mL	UF: 005: 5kDa 010: 10kDa 030: 30kDa 050: 50kDa 100 : 100kDa	MF: 010: 0.1μm 022: 0.22μm 045: 0.45μm	N:Non-sterile