

Alidep® Depth Filter

Single-use Design

Flexible Media Selection

Robust & Reliable

Easy Operation



⊕ Product Introduction

The Alioth Alidep® Depth Filter is designed primarily for clarification steps in pharmaceutical processes, offering enhanced flexibility for large-scale production through its disposable format.

The Alidep® Depth Filter is available in a range of media combinations, typically composed of cellulose, filter aids, and positively charged resins. It delivers a high dirt-holding capacity, making it well-suited for clarifying cell culture fluid. The filter progressively retains intact cells and cell fragments, reduces turbidity, and effectively adsorbs impurities such as DNA, host cell proteins (HCP), and endotoxins—thereby reducing the burden on downstream purification steps.

With multiple product specifications available, the Alidep® Depth Filter supports applications from laboratory and pilot-scale through to manufacturing-scale.

⊕ Key Features and Benefits

- Disposable design eliminates the need for cleaning validation
- Modular design adapts to current mainstream clarification holders and systems
- Small hold-up volume facilitates easy product recovery, improving yield
- Flexible media selection optimize customer product development
- Easy operation, small footprint, and space-saving design

⊕ Typical Applications

- Clarification of CHO cell culture
- Clarification in vaccine production process
- Clarification of yeast fermentation broth (after centrifugation)
- Clarification in plasmid production process (E. coli lysate)
- Clarification of lentivirus and adeno-associated virus culture fluid

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Product Specifications

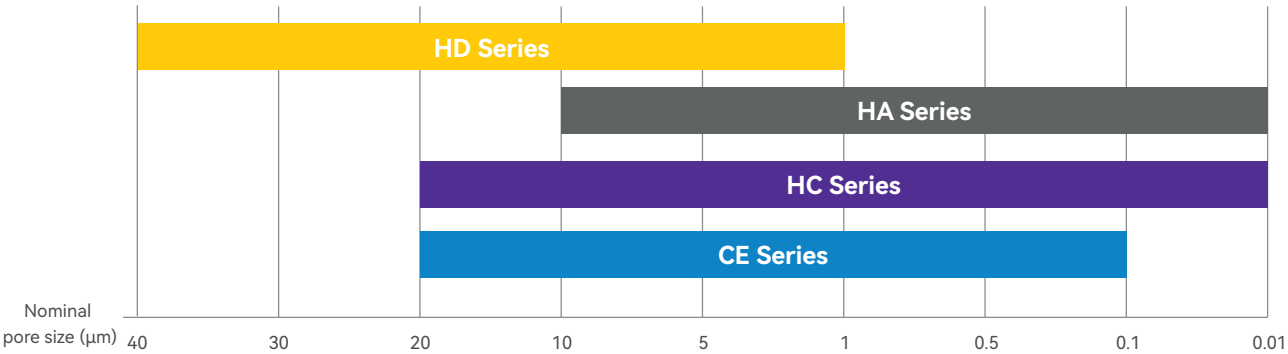
Product Specifications	Product Series	Alidep® process development scale (L series)	Alidep® laboratory scale (P series)	Alidep® production scale (M series)
	Effective Filtration Area	23 cm²	270 cm², 540 cm²	0.11 m², 0.55 m², 1.1 m²
	Overall Dimension	9.4 × 7.1 × 4.3 cm	22 × 14 × (7.4 ~ 9.6) cm	62 × 32 × (3.1 ~ 12.4) cm
Materials of Construction	Inlet, Outlet and Exhaust Port	Luer connector: Polypropylene 6 mm hose connector: Glass fiber-filled polypropylene		Flat end connector: Glass fiber-filled polypropylene
	Frame and Cover Material	Glass fiber-filled polypropylene		
	Filter Plate	Cellulose, Filter Aid, Resin or Cellulose		
	Supporting Layer	Polypropylene		
	O-ring	Silicone		
Working Characteristics	Aerosol Challenge Test	Aerosol leakage < 0.01%		
	Maximum Operating Pressure	3.5 bar @ 40°C		
	Maximum Forward Differential Pressure	3.0 bar @ 25°C		
	Maximum Reverse Differential Pressure	2.0 bar @ 25°C		
	Sterilization Resistance	Autoclave: 125°C 60 min, 2cycles		
	Indirect Food Additive	All component materials meet the requirements of Indirect Food Additive cited in FDA 21 CFR 177-182		
	Toxicity	The raw materials of all Alidep® Depth Filter components, including filter plates (mainly made from cellulose, filter aids and resin), frames and covers made from glass fiber-filled polypropylene, depth supporting nets made from polypropylene, and silicone O-rings, meet the biological safety requirements refering to USP <88> Class VI plastic		
	Bacterial Endotoxin	The endotoxin level of rinsing liquid is < 0.25 EU/mL, which complies with the requirements for water for injection in Chinese Pharmacopoeia and United States Pharmacopoeia		

Pore Size Range

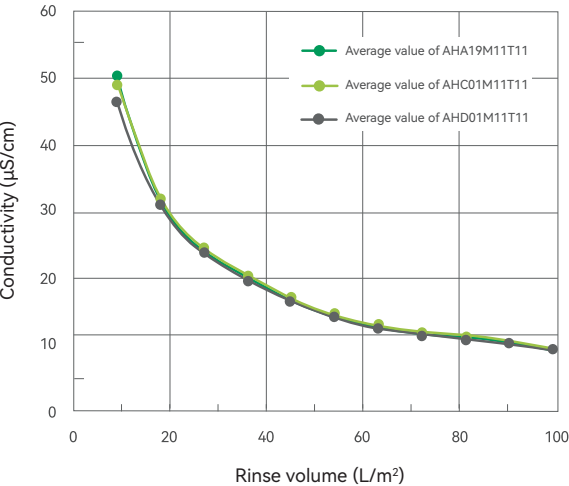
Name of medium	Application	Features	Composition
Double-layer HD Series	Primary clarification of cell culture fluid	Two-stage filter plate and open pore size design, which can retain large particles and fragments	Cellulose, filter aids and resin
Double-layer HA Series	Secondary clarification of cell culture fluid	Double-stage filter plate with a dense structure for stricter turbidity control	Cellulose, filter aids and resin
Double-layer HC Series	Direct clarification of cell culture fluid	Double-stage filter plate, which is designed to clarify material liquid with a low cell density	Cellulose, filter aids and resin
Double-layer CE Series	Clarification of plasmids and virus particles, etca.	Double-stage filter plate, which features low ad-sorption	Cellulose

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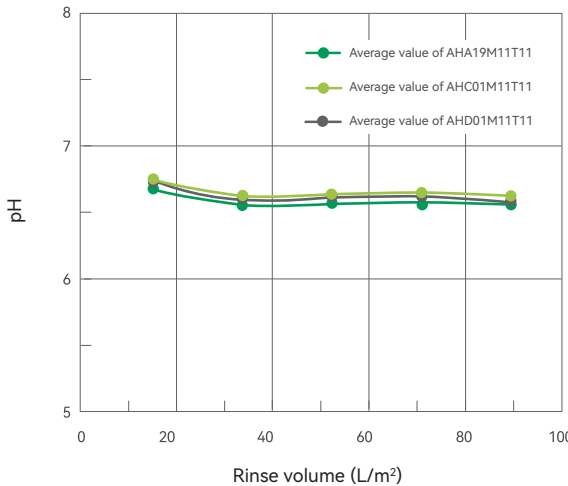
⊕ Pore Size Range



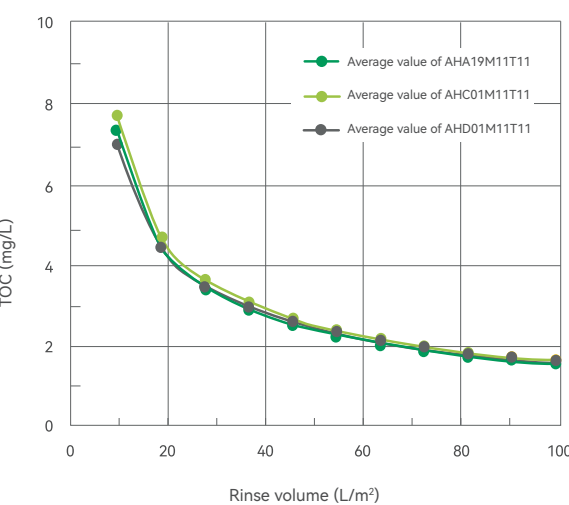
⊕ Conductivity Test Results



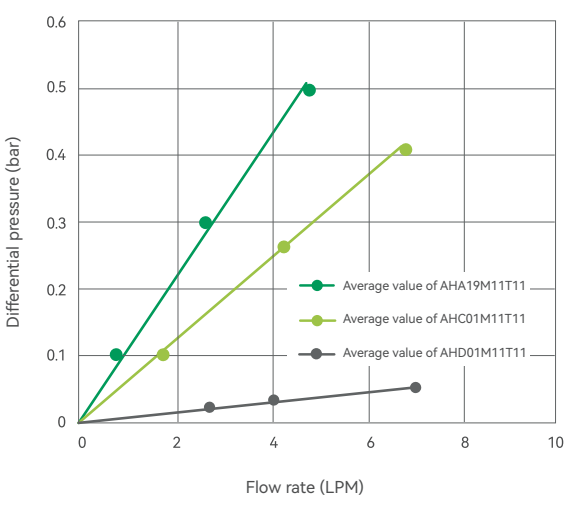
⊕ pH Test Results



⊕ TOC Test Results



⊕ Test Results of Flow Differential Pressure



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Validation Methods and Results

Conductivity	Several filters were randomly selected from different production batches and subjected to high-pressure sterilization at 125°C for 60 minutes. These filters were then rinsed with 100 L/m ² pure water for 10-20 minutes. The conductivity ranged from 2.79 to 7.51 µS/cm
NVR	Several filters were randomly selected from different production batches and subjected to high-pressure sterilization at 125°C for 60 minutes. These filters were then rinsed with 100 L/m ² pure water for 10-20 minutes. The NVR ranged from 667 to 1,314 mg
TOC	Several filters were randomly selected from different production batches and subjected to high-pressure sterilization at 125°C for 60 minutes. These filters were then washed with 100 L/m ² pure water for 10-20 minutes. The TOC ranged from 1.12 to 1.55 mg/L
pH	Several filters were randomly selected from different production batches and subjected to high-pressure sterilization at 125°C for 60 minutes. These filters were then rinsed with 100 L/m ² pure water for 10-20 minutes. The pH ranged from 6.10 to 6.62
Endotoxin	Several filters were randomly selected from different production batches, then rinsed with 100L/m ² pure water for 10-20minutes, followed by soaking in pure water for 24 hours. The endotoxin level was <0.25 EU/mL as indicated by Tachypleus Amebocyte Lysate test
Flow Differential Pressure	Several filters were randomly selected from different production batches and subjected to high-pressure sterilization at 125°C for 60 minutes. These filters were then rinsed with 100 L/m ² pure water for 10-20 minutes. The experiment was conducted at room temperature. After venting, the flow rate was gradually increased, and the upstream and downstream pressures were observed. Within 8 LPM, the differential pressure was < 0.6 bar
Tolerated Liquid Pressure	Several filters were randomly selected from different production batches and subjected to high-pressure sterilization at 125°C for 60 minutes, twice. The tightness of filter was tested. High-viscosity solution was filtered to increase the upstream and downstream differential pressure of filter. The filter was subjected to forward and reverse pulse pressures at room temperature, followed by rinsing, drying and tightness challenge test. At room temperature, Alidep® Depth Filter can withstand 3.0 bar forward pressure and 2.0 bar reverse pressure

Ordering Information

Format	Membrane type	Filter membrane area	Connector type	Package
A=Depth filter	HA01 HC01 HD01 CE01 ACA01 HA02 HC02 HD02 CE02 ACA02	L23=23 cm ² P27=0.027 m ² P54=0.054 m ² M01=0.11 m ² M05=0.55 m ² M11=1.1 m ²	L0=Luer connector (L23) B0=6 mm hose connector (P27, P54) T1=Flat end connector (M01, M05, M11)	1=1/PK 3=3/PK (L23)