

Alidep® Depth Stacked Filter



⊕ Product Introduction

The Alioth Alidep® Depth Stacked Filters are designed primarily for clarification steps in pharmaceutical processes and are used in conjunction with stainless steel filter housings. Available in a variety of sizes, the filters offer flexibility to meet diverse customer requirements.

These depth filters feature multiple media combinations, typically composed of cellulose, filter aids, and positively charged resins—or in some configurations, pure cellulose. This construction enables high throughput and efficient performance in cell culture clarification. The filters provide gradual retention of cells and cell debris, effectively reducing turbidity while adsorbing impurities such as DNA, host cell proteins (HCP), and endotoxins. This helps alleviate the burden on downstream purification steps.

⊕ Key Features and Benefits

- Multiple size specifications and customized according to customer needs.
- Flexible media selection to optimize customer product development.
- Adapted to current mainstream filter housing and systems.
- Strict production control and release testing, reliable performance, and low process risk.

⊕ Typical Applications

- Clarification of CHO cell culture
- Clarification in vaccine production process
- Clarification of yeast fermentation broth
- Clarification of other liquid material

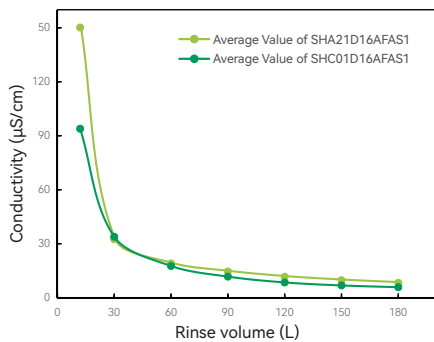
Alidep® Depth Stacked Filter

Product Specifications

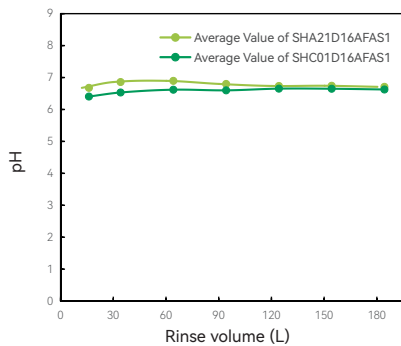
Product Specifications	Product Series	16 inch	12 inch	Other Custom Specifications
	Effective Filtration Area Per Layer	0.23 m ²	0.11 m ²	Optional
	Represents Product Height	Double-layer membrane: 8 layers – 184 mm; 10 layers – 275 mm Single-layer membrane: 10 layers – 258 mm; 16 layers – 275 mm		
Materials of Construction	Filter Media	Cellulose, Filter Aid, Resin or Cellulose		
	Frame and Supporter	Glass Fiber Reinforced Polypropylene		
	Stainless Steel Band	316L		
Working Characteristics	O-ring	Silicone		
	Particle Challenge	Particle Intercept>90%		
	Max Operation Pressure	3.0 bar @ 25°C		
	Max Pressure Differential	Forward: 2.0 bar @ 25°C Reverse: not recommended		
	Sterilization Resistance	Steam-In-Place: 126°C 30 min, 3 cycles		
	Indirect Food Additive	All component materials meet the requirements of Indirect Food Additive cited in FDA 21 CFR 177-182		
Toxicity	Bacterial Endotoxin	The raw materials of all Alidep® Depth Stacked Filter components meet the biological safety requirements referring to USP<88> Class VI plastic		
		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		

Validation Methods and Results

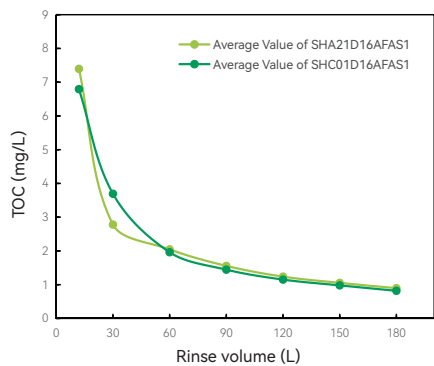
Conductivity Test Results



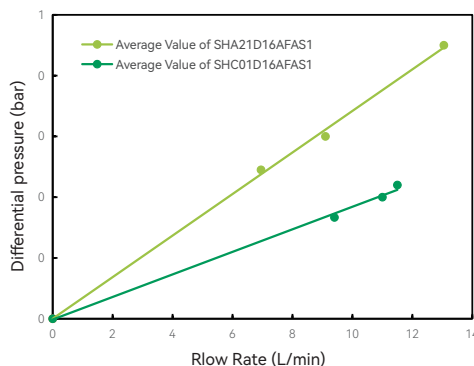
pH Test Results



TOC Test Results



Test Results of Flow and Differential Pressure



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⊕ Validation Summary

Conductivity	Several filters were randomly selected from different production batches, then rinsed with 100L/m ² pure water for 10–20 minutes. The conductivity ranged from 5–8 µS/cm.
TOC	Several filters were randomly selected from different production batches, then rinsed with 100L/m ² pure water for 10–20 minutes. The TOC was about 1mg/L.
pH	Several filters were randomly selected from different production batches, then rinsed with 100L/m ² pure water for 10–20minutes. The pH ranged from 6.6–6.8.
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.
Endurance to Sterilization	Several filters were randomly selected from different production batches, after 3 cycles of SIP at 126°C for 30min, filters passed air tightness, diffusion flow, hydraulic stress. Flow rate and pressure dropafter SIP met the product quality standard.
Hydraulic Stress	Several filters were randomly selected from different production batches, respectively conduct hydraulic stress test at ambient temperature and after 3 cycles of SIP at 123°C for 30min. High-viscosity solutions was filtered to increase the pressure drop across the filters. Apply forward pulse pressure to the filter at ambient temperature, rinseand conduct diffusion flow. Depth stacked filter can withstand 2.0bar forward pressure at ambient temperature.

⊕ Ordering Information

Format S=Depth Stacked Filter	Membrane type HA01, HA02.. HC01, HC02... CE01, CE02..	Membrane component D=Double layer S=Single layer	Dimension 12=12 inch 16=16 inch	Cell A=8 cells C=10 cells F=16 cells	Adapter F=Flat Seal
Structure A=SS Band	O-ring S=Silicone	Package 1=1EA/pkg			