LeSiever™ Hydrophobic PES Sterilizing Air Filters

The LeSiever™ hydrophobic PES sterilizing air filters utilize a hydrophobic PES (PFAS-Free) membrane, independently developed by LePure Biotech, as its core material. This membrane offers superior air permeability and hydrophobic properties, ensuring optimal ventilation conditions for cell culture applications.

It is widely acknowledged that hydrophobic PES membranes exhibit superior air permeability compared to hydrophobic PVDF membranes, and PES membrane materials display greater stability under gamma radiation exposure than PTFE. Consequently, they are especially well-suited for air sterilization applications requiring irradiation, such as serving as a breather in single-use systems.

LePure Biotech is a premier supplier of hydrophobic PES air filters, offering a comprehensive range of specifications and sizes tailored for applications ranging from small-scale to large-scale scenarios. The LeSiever™ hydrophobic PES sterilizing air filters, with a pore size of 0.2 µm, efficiently remove contaminant particles and microorganisms from gases. It is predominantly employed for the sterilization filtration of air and gases, ensuring the maintenance of a sterile environment during the ventilation process.

Advantages

- Reliable bacteria and particle retention capability
- 100% pressure hold test
- Low air resistance, high throughput
- Successfully passed both forward and reverse retention testing for 10^7CFU/cm^2 *Brevundimonas diminuta* (ATCC® 19146™).





Applications

- Sterile Tank Ventilation System
- Sterilization of Exhaust Gases through Advanced Treatment Processes
- In Cell Culture and Microbial Fermentation Processes, precise control and optimization are essential for achieving high yields and quality products.
- Sterile Air Filtration in the Filling Process

Technical Parameters of Disc and Capsules

Size	D2	D5	S1	S5	2″	4″	5″	10″	20″
Area(m^2)	0.00028	0.002	0.018	0.055	0.13	0.23	0.33	0.66	1.32
Composition Material									
Filter Membrane	Hydrophobic Polyethersulfone (PES PFAS-Free)								
Supports	Polypropylene (PP)								
Housing	Polypropylene (PP)								
O Ring	Silicone								
Pore Size	0.2 μm (Single Layer)								
Integrity Test									
Water Intrusion Test (WIT)@ 1.5 bar | 22 psi, ambient (≤ mL/min)	-	-	-	-	-	0.4	0.45	0.75	1.55
Diffusion Flow @ 0.7 bar 60 /40% IPA/Water (≤ mL/min)	-	-	1.5	2.0	4.0	5.5	8.0	14.0	26.0
Bubble Point,ambient	≥ 1000 mbar (14.5 psi), 60/40 % IPA/Water								
Bacterial Retention	According to ASTM testing methods, the retention test for *Brevundimonas diminuta* (ATCC® 19146TM)was conducted with forward and reverse 10^7 CFU/cm^2 defects.								
Endotoxin	< 0.25 EU/mL								
Sterilization Metho									
Gamma Sterilization	25-40 kGy								
No Fiber Release	Complies with the 'No Fiber release' regulations in 21 CFR 210.3 (b) (6)								
Biocompatibility	Passed USP <87> and USP <88> test								

*Note:
LePure Biotech provides multiple hydrophobic PES filters tailored to diverse application scenarios. The different product series vary in model,specifications, and performance parameters, primarily including key parameters such as effective filtration area, in-tegrity metrics, and maximum sterilization limits. Specific product parameters differ among series. It is advised to contact Lechun Biotech's technical support team to obtain detailed technical product information according to actual application requirements.

Ordering Information

LeSiever™ Hydrophobic PES Sterilizing Air Filter

N	A	1	E	1	S	1	0	H	H	1
Area	Grade	style	Membrane Material	Pore size	Sterilization method	Dimension		connector		Package
N: Oversea	A:Air Filter	1:Capsule	E:Hydrophobic PES (PFAS-Free)	1: 0.2 μm	D: Gmma Reistant, non sterilized	D2:25mm Syringe		T=38mm(1.5")TC connector		1:1 piece/ package
		2:Disc Type			S: Gamma sterilized	D5:50mm disc		F=19.1mm(3/4") TC connector		3: 3 pieces/ package
		3:Syringe needle				S1:180cm²		H=12.7mm(1/2") hose barb connector		4: 4 pieces/ package
						S5:550cm²		B=19.1mm(3/4") hose barb connector		6: 6 pieces/ package
						02: 2"		O=1/4~1/2"(6.4~12.7mm) Multiple stepped hose barb (Capsule)		X: 10 pieces/ package
						04: 4"		N:1/4~1/2" (6.4~12.7mm) Multiple stepped hose barb (Disc)		Y: 50 pieces/ package
						05: 5"		L=Luer connector		M: For Assembly
						10:10"				
						20:20"				

Filter Size	Article NO.(skip the connector part)	Area	Package
D2	A3E1DD2LLY	2.8cm²	50/per pack
D2	A3E1SD2LLY	2.8cm²	50/per pack
D5	A2E1DD5NNX	20cm²	10/per pack
D5	A2E1SD5NNX	20cm²	10/per pack
S1	A1E1DS1--6	180cm²	6/per pack
S1	A1E1SS1--6	180cm²	6/per pack
S5	A1E1DS5--4	550cm²	4/per pack
S5	A1E1SS5--4	550cm²	4/per pack
2 inch	A1E1D02--4	0.13m²	4/per pack
2 inch	A1E1S02--4	0.13m²	4/per pack
4 inch	A1E1D04--3	0.23m²	3/per pack
4 inch	A1E1S04--3	0.23m²	3/per pack
5 inch	A1E1D05--1	0.33m²	1/per pack
5 inch	A1E1S05--1	0.33m²	1/per pack
10 inch	A1E1D10--1	0.66m²	1/per pack
10 inch	A1E1S10--1	0.66m²	1/per pack
20 inch	A1E1D20--1	1.32m²	1/per pack
20 inch	A1E1S20--1	1.32m²	1/per pack

*Note : 1. Each letter and number in the article number represents a specific meaning. This coding rule is only for explanation and not all combinations can form a valid product model.
2. For more product models, please contact technical support.

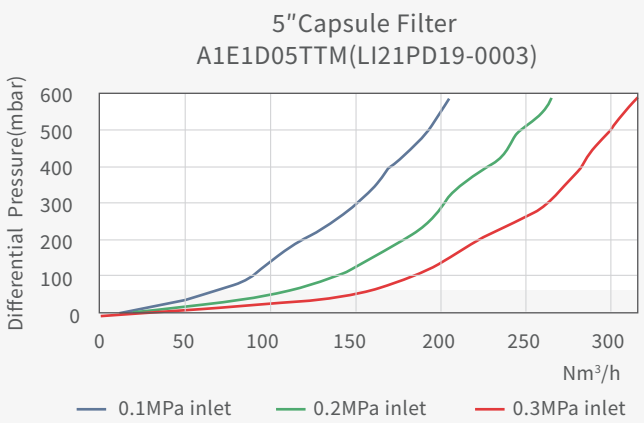
Connector Information of Capsules

Size vs Connector Code	N	O	H	F	T	B
	1/4"-1/2" Multiple stepped hose barb	1/4"-1/2" Multiple stepped hose barb	1/2"(12.7mm) hose barb Connector	3/4"(19.1mm) TC25 Connector	3/2"(38.1mm) TC50 Connector	3/4"(12.7mm) hose barb Connector
S1	n.a.	●	n.a.	●	n.a.	n.a.
S5	n.a.	●	●	●	●	n.a.
2"	n.a.	●	●	●	●	n.a.
4"	n.a.	●	●	●	●	n.a.
5"	n.a.	n.a.	●	n.a.	●	n.a.
10"	n.a.	n.a.	●	n.a.	●	n.a.
20"	n.a.	n.a.	n.a.	n.a.	●	●

Note：●= the adapter type is available.
n.a.=Not Applicable.

Typical air flow rate and pressure differential

5" Capsule air filter with TC inlet and outlet, gamma irradiation sterilization



LePure Biotech
Building 1-3, No.269, Rongxin Road, Songjiang District, Shanghai, China
Email: support@lepurebiotech.com

LePure Biotech LLC
2200 West Park Drive, Suite 300, Westborough, MA 01581, USA
Email: contacts@lepurebiotech.com

Official Website Follow LinkedIn