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biotech

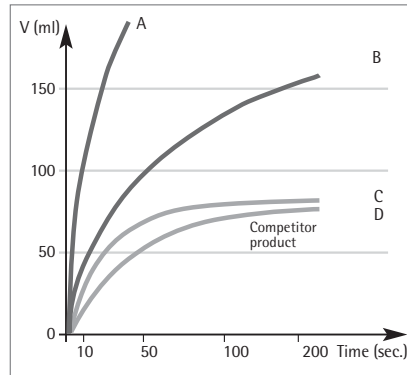
Sartolab[®] P The new way for reliable sterile filtration of cell culture media



turning science into solutions

Sartolab® P 20 and Sartolab® P 20 Plus

Application and product description



Fast filtration

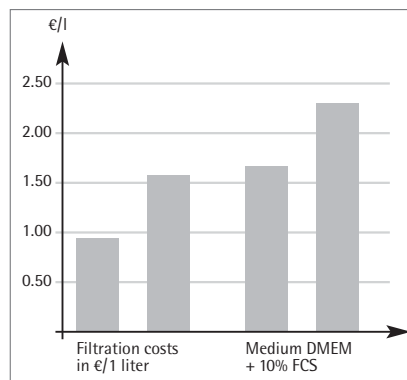
The combination of a large filtration area (20 cm²) and the optimal design of the filter support guarantees high flow rates with high total throughputs. Automatic venting of any trapped air through the PTFE membrane-protected vent ports ensures that the entire filter surface is used for effective filtration.

Application

The new Sartolab® P20 is a ready-to-use pressure filtration unit for sterile filtration of media and aqueous solutions in batches ranging from 100 ml to 5 l. For media that contain sera and difficult-to-filter solutions, a Sartolab® P20 Plus unit with an incorporated prefilter is also available.

Security

The effectiveness of every batch of 0.2 µm cellulose acetate membranes for sterile filtration is confirmed by bacteria challenge tests (HIMA) using *Brevundimonas diminuta*. Only biosafe material is used in the filtration units; they have been proven non-toxic by passing the USP plastics test for toxicity. Tests with MRC-5 human lung cells on cellulose acetate membranes and glass fiber prefilters showed no cytotoxic effects. Finished units are also tested for their sterile filtration capability and for housing and membrane integrity.



Economy

Sartolab® P20 units feature an excellent price | performance ratio. The glass fiber prefilter in Sartolab® P20 Plus units often enables the total throughput to be doubled. Both types can be used in an available system with a peristaltic pump, so no extra investment is required.

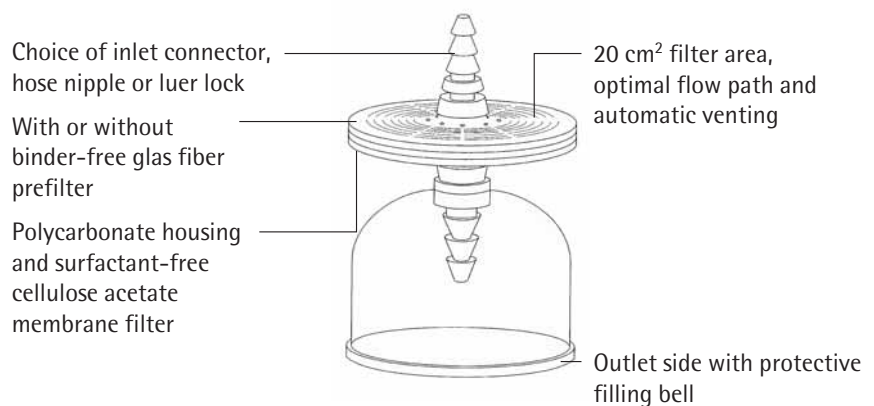
Product description

Sartolab® P20 and Sartolab® P20 Plus are ready-to-connect, single-use filtration units.

A surfactant-free cellulose acetate membrane with very low unspecific protein binding is welded into the polypropylene housing. Sartolab® P20 Plus contains an additional 100% binder-free glass fiber prefilter on the cellulose acetate membrane.

Vent ports on the inlet side of the housing are protected against liquid passage by a hydrophobic PTFE membrane.

The units are available with either a hose nipple or a luer lock as an inlet connector and with a filling bell on the outlet side.



Sartolab® P20 and Sartolab® P20 Plus Complete systems



Using Sartolab® P20 or Sartolab® P20 Plus in available systems

Systems with luer lock connectors

Sartolab® units with a luer lock inlet fit directly onto the corresponding connectors of tubing from peristaltic pumps. This configuration can also be used with luer lock syringes.



Systems with tubing

If the liquid to be filtered will be pumped through open tubing from a pressure tank or a peristaltic pump, then a Sartolab® unit with a hose nipple inlet is required. The stepwise increase in diameter of the nipple, from 6 mm to 12 mm, makes it suitable for a wide range of tubing.

The complete system with a diaphragm pump and luer lock units

This system consists of a Sartolab® P20 or Sartolab® P20 Plus unit and a diaphragm pump with a tubing set.

The pump is adjusted to 2.5 bar maximum pressure as supplied, delivering a nominal pumping rate of 650 ml/min for water. The priming rate with a Sartolab® P20 unit or Sartolab® P20 Plus attached is approx. 300 ml/min at full pumping capacity.

The tubing material is silicone. A sinker is fitted on the tubing end, which is placed in the liquid to be filtered so that the tubing remains immersed.

An adapter is slipped onto the tubing end, which is then fitted to the Sartolab® unit for a pressure-resistant connection.

The pump diaphragm, stainless steel sinker, adapter, and tubing are all resistant to 1 N NaOH.



Specifications

Table 1 – Specification for Sartolab® P20 and Sartolab® P20 Plus Units with SFCA Membrane

Properties	Description	
	Sartolab® P20 18052 18053	Sartolab® P20 Plus 18056 18058
Filter material	SFCA, type 12587, 0.2 µm pore size and PTFE	SFCA, type 12587 0.2 µm pore size plus GF, 100 % free of binding agents and PTFE
Housing material	Polycarbonate	Polycarbonate
Color code	Transparent	Transparent
Filter diameter	64 mm	64 mm
Connector inlet	Female luer lock or stepped hose nipple with 6–12 mm outer diameter	Female luer lock or stepped hose nipple with 6–12 mm outer diameter
Connector outlet	Hose nipple	Hose nipple
Filling bell	Available	Available
Filtration area	20 cm ²	20 cm ²
Hold-up volume before bubble point	1 ml	Approx 1.5 ml
Housing burst pressure	> 5 bar 72.5 psi	> 5 bar 72.5 psi
Bubble point	≥ 3.2 bar 46.4 psi	≥ 3.2 bar 46.4 psi
Max. recommended inlet pressure	3 bar 43.5 psi	3 bar 43.5 psi
Flow rate for water	≥ 250 ml/min at Δp = 1 bar 14.5 psi	≥ 250 ml/min at Δp = 1 bar 14.5 psi
Filtration range	100 ml–max. 5 l	100 ml–max. 10 l
pH-range	4–8	4–8
Non-specific protein adsorption	No loss of protein detectable (filtration of γ globulin, method acc. to Bradford)	< 80 µg/cm ² (filtration of γ globulin, method acc. to Bradford)
Sterilization	EO sterilization	EO sterilization
Biosafety	Class VI Plastics Test	Class VI Plastics Test
Operating instructions	Directions for use included in each box	Directions for use included in each box

Table 2 – Specifications for Sartolab® P20 and Sartolab® P20 Plus Units with PES Membrane

	Sartolab® P20 Plus 18068	Sartolab® P20 18075
	Filter material	PES, type 15407 MI 0.2 µm pore size plus GF, 100 % free of binding agents and PTFE
Housing material	Polycarbonate	Polycarbonate
Color code	Transparent	Transparent
Filter diameter	64 mm	64 mm
Connector inlet	Female luer lock or stepped hose nipple with 6–12 mm outer diameter	Female luer lock or stepped hose nipple with 6–12 mm outer diameter
Connector outlet	Hose nipple	Hose nipple
Filling bell	Available	Available
Filtration area	20 cm ²	20 cm ²
Hold-up volume before bubble point	Approx 1.5 ml	1 ml
Housing burst pressure	> 5 bar 72.5 psi	> 5 bar 72.5 psi
Bubble point	≥ 3.2 bar 46.4 psi	≥ 3.2 bar 46.4 psi
Max. recommended inlet pressure	3 bar 43.5 psi	3 bar 43.5 psi
Flow rate for water	400 ml/min at Δp = 1 bar 14.5 psi	400 ml/min at Δp = 1 bar 14.5 psi
Filtration range	100 ml–max. 5 l	100 ml–max. 10 l
pH range	1–8	1–8
Non-specific protein adsorption	< 80 µg/cm ² (filtration of γ globulin, method acc. to Bradford)	No loss of protein detectable (filtration of γ globulin, method acc. to Bradford)
Sterilization	EO sterilization	EO sterilization
Biosafety	Class VI Plastics Test	Class VI Plastics Test
Operating instructions	Directions for use included in each box	Directions for use included in each box



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