



Sartoclear Dynamics® Lab V

For simultaneous clarification and sterile filtration of 50 mL to 1 L mammalian cell cultures in one step

User Benefits

- Clarify high-density mammalian cell culture in minutes
- Out-of-the-box solution
- Fast and effortless
- No need for centrifugation



Product Information

Sartoclear Dynamics® Lab V kits are designed for simultaneous clarification and sterile filtration of 50 mL to 1 L of mammalian cell culture broth to prepare samples for subsequent downstream processing steps, such as protein purification and concentration. The convenient kits combine pouches of filter aid for clarification and vacuum filtration units for sterile filtration.

High Filtration Performance

Sartoclear Dynamics® Lab V kits have been designed for cell harvesting of mammalian cell cultures, such as CHO, HEK, hybridomas and many others, with high cell densities.

Clarification Using Body Feed Filtration

Inspired by the plasma industry, Sartoclear Dynamics® is based on the principle of body feed filtration using diatomaceous earth (DE) as a filter aid. DE is a highly porous, insoluble material used as a spacer between solid particles. While these particulate solids are entrapped in a cake that builds up on the filter, liquid along with the dissolved target substances can easily flow through this filter cake by passing through the porous structure of the DE particles.

Sterile Filtration with the Membrane of Choice: Polyethersulfone

All Sartoclear Dynamics® Lab products feature a Sartorius 0.22 µm polyethersulfone membrane, which has been developed and manufactured by Sartorius at its own facilities. This membrane provides the fastest flow rates and ensures low protein binding. Therefore, it is the membrane of choice for cell culture harvesting applications.

10 Kits to Cover a Range of Volumes and Cell Densities

Ten kits are available to meet all your needs based on your filtration volume and the cell density of your mammalian cell cultures.

Technical Specifications

Typical Results

Cell Type	Cell Density	Viability	Monoclonal Antibody (mAb) Concentration Before Filtration	Monoclonal Antibody (mAb) Concentration After Filtration	Recovery Rate	Turbidity
CHO	14.46 × 10 ⁶ cells/mL	85.2%	5.2 g/L	5.15 g/L	99%	18 NTU
HEK	8 × 10 ⁶ cells/mL	70%	0.035 g/L	0.034 g/L	97%	8 NTU

Clarification

Pouches of filter aid

Diatomaceous Earth (DE) 1 g, 5 g or 10 g highly pure diatomaceous earth, (Celpure[®] C300 – pharmaceutical grade)*, mixed with water in a ratio of 1 DE : 1.25 ultrapure water
Dust-free, gamma irradiated

* Celpure[®] is a trademark of Advanced Minerals

Sterile Filtration

Vacuum filtration units (Sartolab[®] RF)

Funnel, dust cover, receiver bottles	Heavy metal-free polystyrene
Filter adapter, tubing adapter, cap	Heavy metal-free polyethylene
Filter material	0.22 µm polyethersulfone
Packaging	Single-packaged, sterile

Each Sartoclear Dynamics[®] Lab V kit is comprised of pouches of filter aid and vacuum filtration units (Sartolab[®] RF) that match your needs. Find the right kit in just two easy steps:

1. Determine the volume range of your sample to be filtered.
2. Then reference this range to the cell density of your cell culture.

Volume*	Cell Density**		
	< 5 million cells/mL	5 – 10 million cells/mL	10 – 20 million cells/mL
50 – 150 mL	SDLV-0150-02C--E	SDLV-0150-05C--2	SDLV-0150-05C--2
150 – 250 mL	SDLV-0250-05C--2	SDLV-0250-10C--2	SDLV-0250-10C--2
250 – 500 mL	SDLV-0500-05C--2	SDLV-0500-10C--2	SDLV-0500-20C--E
500 – 1,000 mL	SDLV-1000-10C--2	SDLV-1000-20C--E	SDLV-1000-40C--E

* Especially for cultures with high cell densities (>10 million cells/mL), we recommend that you use a Sartolab[®] RF unit nominally rated for the next higher volume of the solution to be filtered as it will accelerate your filtration run (larger membrane surface area | higher quantity of DE).

** Tested with CHO cell lines with a cell viability of approx. 85%

Ordering Information

Order Number	Description	Quantity	Order Number	Description	Quantity
Filtration of up to 150 mL Mammalian Cell Cultures Sartoclear Dynamics® Lab V150 Kits			Filtration of up to 250 mL Mammalian Cell Cultures Sartoclear Dynamics® Lab V250 Kits		
SDLV-0150-02C--E	Sartoclear Dynamics Lab V, 150 mL, 2 g Filtration of up to 150 mL with 2 g of DE per unit Contents: 1 × 180C1-----E (12 × Sartolab RF 150) 1 × SDLKG-01.0-----2 (24 × pouches of filter aid, 1 g)	12	SDLV-0250-05C--2	Sartoclear Dynamics Lab V, 250 mL, 5 g Filtration of up to 250 mL with 5 g of DE per unit Contents: 2 × 180C7-----E (24 × Sartolab RF 250) 1 × SDLKG-05.0-----2 (24 × pouches of filter aid, 5 g)	24
SDLV-0150-05C--2	Sartoclear Dynamics Lab V, 150 mL, 5 g Filtration of up to 150 mL with 5 g DE per unit Contents: 2 × 180C1-----E (24 × Sartolab RF 150) 1 × SDLKG-05.0-----2 (24 × pouches of filter aid, 5 g)	24	SDLV-0250-10C--2	Sartoclear Dynamics Lab V, 250 mL, 10 g Filtration of up to 250 mL with 10 g of DE per unit Contents: 2 × 180C7-----E (24 × Sartolab RF 250) 1 × SDLKG-10.0-----2 (24 × pouches of filter aid, 10 g)	24
Filtration of up to 500 mL Mammalian Cell Cultures Sartoclear Dynamics® Lab V500 Kits			Filtration of up to 1 L Mammalian Cell Cultures Sartoclear Dynamics® Lab V1000 Kits		
SDLV-0500-05C--2	Sartoclear Dynamics Lab V, 500 mL, 5 g Filtration of up to 500 mL with 5 g DE per unit Contents: 2 × 180C2-----E (24 × Sartolab RF 500) 1 × SDLKG-05.0-----2 (24 × pouches of filter aid, 5 g)	24	SDLV-1000-10C--2	Sartoclear Dynamics Lab V, 1,000 mL, 10 g Filtration of up to 1 L with 10 g of DE per unit Contents: 2 × 180C3-----E (24 × Sartolab RF 1000) 1 × SDLKG-10.0-----2 (24 × pouches of filter aid, 10 g)	24
SDLV-0500-10C--2	Sartoclear Dynamics Lab V, 500 mL, 10 g Filtration of up to 500 mL with 10 g DE per unit Contents: 2 × 180C2-----E (24 × Sartolab RF 500) 1 × SDLKG-10.0-----2 (24 × pouches of filter aid, 10 g)	24	SDLV-1000-20C--E	Sartoclear Dynamics Lab V, 1,000 mL, 20 g Filtration of up to 1 L with 20 g of DE per unit Contents: 1 × 180C3-----E (12 × Sartolab RF 1000) 1 × SDLKG-10.0-----2 (24 × pouches of filter aid, 10 g)	12
SDLV-0500-20C--E	Sartoclear Dynamics Lab V, 500 mL, 20 g Filtration of up to 500 mL with 20 g of DE per unit Contents: 1 × 180C2-----E (12 × Sartolab RF 500) 1 × SDLKG-10.0-----2 (24 × pouches of filter aid, 10 g)	12	SDLV-1000-40C--E	Sartoclear Dynamics Lab V, 1,000 mL, 40 g Filtration of up to 1 L with 40 g of DE per unit Contents: 1 × 180C3-----E (12 × Sartolab RF 1000) 2 × SDLKG-10.0-----2 (48 × pouches of filter aid, 10 g)	12

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