

## Instructions for Use

# Sartoclear Dynamics® Lab Filter Aid

Filter Aid



1000044321



# SARTORIUS



A PDF version of the Instructions for Use is available on our website  
in English, German, French, Spanish, Italian, and Chinese:  
[www.sartorius.com](http://www.sartorius.com)

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# 1 Safety Information

## 1.1 Intended Use

The product described in this document is intended to be used for clarification of mammalian cell cultures prior to sterile filtration. The use of this product for other applications or in a manner other than described in these Instructions for Use may result in personal injury or malfunction of the product. Please follow the instructions of this user manual to ensure your own safety and to obtain optimal filtration results.

The Sartoclear Dynamics® Lab Filter Aid has been designed for the clarification of mammalian cell suspension cultures and eliminates the need for centrifugation prior to sterile filtration.

The pouches delivered in this box are filled with pre-wetted diatomaceous earth as a filter aid. This aid does away with handling and health issues associated with standard powder-based filter aids.

The Sartoclear Dynamics® Lab Filter Aid is only available with Sartolab® RF | BT vacuum filtration units for the clarification and sterile filtration of cell cultures in one step.

## 1.2 Personal Protective Equipment

Personal protective equipment protects against risks arising from the product. If the personal protective equipment is missing or unsuitable: People might be injured.

Protective Equipment Designation	Explanation   Examples
Safety glasses	Protect against harmful influences and irritation, e.g., from liquids, chemicals, splinters, or particles.
Respiratory mask	Protects against harmful influences and respiratory issues caused if the product has been stored open for too long and the water has evaporated.

- Wear appropriate personal protective equipment.
- When the operating area or the process in which the product is used requires additional safety precautions: wear the appropriate, additional personal protective equipment.

## 2 Contents and Ordering Information

Item Number	Description	Quantity of Pouches per Box
SDLKG-01.0-----2	Each pouch contains 1 g of diatomaceous earth, pre-wetted	24
SDLKG-05.0-----2	Each pouch contains 5 g of diatomaceous earth, pre-wetted	24
SDLKG-10.0-----2	Each pouch contains 10 g of diatomaceous earth, pre-wetted	24
SDLKG-20.0-----E	Each pouch contains 20 g of diatomaceous earth, pre-wetted	12

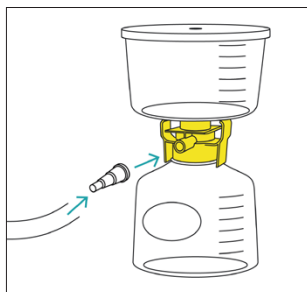
The filter aid contained in the pouches is made of highly pure diatomaceous earth (pharmaceutical-grade) pre-wetted with ultrapure water so as to ensure minimal dust and safe working.

The filter aid boxes (SDLKG-01.0-----2, SDLKG-05.0-----2, SDLKG-10.0-----2, SDLKG-20.0-----E) are sold in combination with Sartolab® RF | BT vacuum filtration units only.

The Sartoclear Dynamics® Lab V kits contain vacuum filtration units and pouches of filter aid. Different versions are available depending on the volume of cell culture to be filtered and the quantity of the filter aid needed to ensure rapid filtration.

A list of the available SDLV kits can be found at: [www.sartorius.com/sdl](http://www.sartorius.com/sdl).

### 3 Instructions for Use



1. Unpack the filtration unit (Sartolab® RF | BT). If using a filtration unit without a bottle (Sartolab® BT), screw the funnel onto a bottle with a 45 mm thread. Connect the vacuum connection of the Sartolab® RF | BT unit to a vacuum source. If necessary, use the tube connector. See also the Instructions for Use supplied with the Sartolab® RF | BT units for more detailed information on the filtration process.

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#### **⚠ CAUTION**

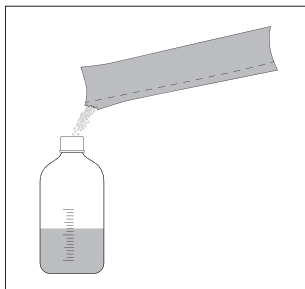
**Danger of diatomaceous earth coming into contact with eyes!** Contact can cause eye irritation. Do not allow diatomaceous earth to come into contact with skin or eyes. In case of diatomaceous earth coming into contact with eyes, immediately rinse the eyes thoroughly with water. Wash skin with water.

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#### **⚠ CAUTION**

**Danger of inhaling diatomaceous earth dust if the product has been stored open for too long and the water has evaporated!** The product contains crystalline silicon dioxide (CS), which is classified as a Group 1 carcinogen. Avoid inhaling diatomaceous earth or wear a suitable respiratory mask. In case of respiratory issues, take the user outdoors.

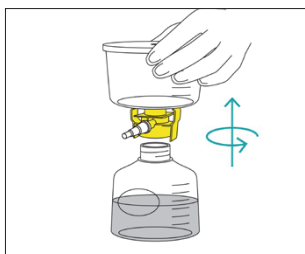
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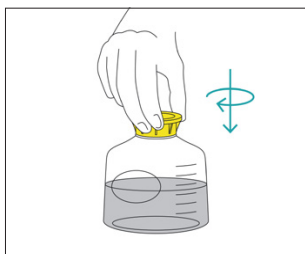
2. Use the appropriate number of filter aid pouches per filtration unit (see Chapter 6 'Typical Performance Specifications'). Open the pouch(es), pour the filter aid into the cell culture, and mix to homogenize. Discard the empty pouches.



3. Immediately after mixing the filter aid with the cell culture broth, remove the dust cover from the funnel, pour the cell culture | filter aid mixture into the Sartolab® RF | BT and place the dust cover back on. Then apply vacuum to the filtration unit to filter.



4. After completion of filtration, disconnect the filter unit from the vacuum source and remove the receiver bottle from the filter unit by unscrewing it from the filter adapter. Discard the upper part in accordance with your local legislation.



5. Cap the sterile-filtered cell culture liquid in the receiver bottle and store the bottle for subsequent analysis or protein purification.



## 4 Technical Data

### 4.1 Typical Performance Specifications

The filterability of mammalian cell cultures depends on various factors, e.g., cell type, cell density, and viability of the cells. Since cell cultures can be very different, we recommend that you use 10, 20, or 40 g of filter aid per liter of cell culture. Using a Sartolab® RF|BT unit with a larger filtration surface area can also accelerate filtration. Below is a table with a few examples for guidance:

Cell Type	Cell Density	Viability	Volume	Quantity of Filter Aid per Filtration	Type of Vacuum Filtration Unit (Sartolab® RF/BT)
CHO cells	15 million cells/mL	86%	500 mL	20 g	Sartolab® RF 500 mL, 0.22 µm PES
CHO cells	14 million cells/mL	3%	1,000 mL	40 g	Sartolab® RF 1000 mL, 0.22 µm PES
CHO cells	14 million cells/mL	94%	50 mL	1 g	Sartolab® RF 50 mL, 0.22 µm PES
HEK cells	8 million cells/mL	90%	500 mL	20 g	Sartolab® RF 500 mL, 0.22 µm PES
HEK cells	4 million cells/mL	94%	500 mL	5 g	Sartolab® RF 500 mL, 0.22 µm PES

## 5 Storage and Disposal

Store the Sartoclear Dynamics® Lab Filter Aid pouches at room temperature.

All components of the Sartoclear Dynamics® Lab Filter Aid can be disposed of using regular waste disposal methods in accordance with your local legislation. Wet used material with water and store in tightly closed vessels until the material is disposed of.

## 6 Application Support

Contact your local Sartorius representative to obtain general information and technical data, or contact one of our application product specialists from around the globe who will be happy to support you.

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The information and figures contained in these instructions correspond to the version date specified below.

Sartorius reserves the right to make changes to the technology, features, specifications and design of the equipment without notice.

Masculine or feminine forms are used to facilitate legibility in these instructions and always simultaneously denote all genders.

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