Sartolab® RF | BT

Sustainability fact sheets

Simplifying Progress

SARTORIUS

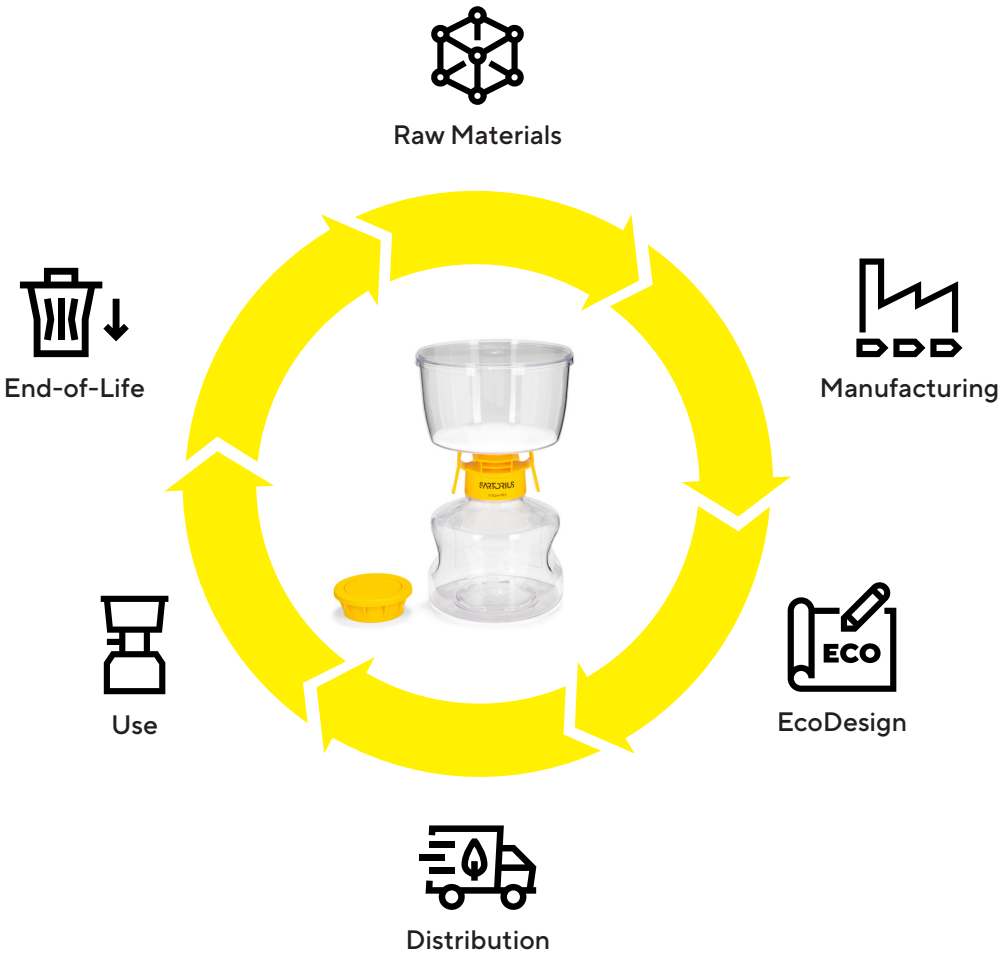
Overview

Sartolab® RF|BT vacuum filtration units are designed for research purposes, specifically for the filtration of small volumes ranging from> 50 mL to 1 L. The Sartolab® RF system includes a receiver flask attached to the filtration funnel. The Sartolab® BT is a bottle top filter (filtration funnel) that comes without a receiver flask. This allows you to use your own receiver flasks and/or expand the filtration capacity, depending on the particle load of the liquids being filtered.

These filtration products are designed to handle a variety of liquids, including hazardous substances. Consequently, recycling options may be limited after use. Despite these limitations, we remain committed to sustainability and continue to explore ways to minimize our environmental impact while delivering high-quality, efficient solutions for your research needs.

Life Cycle Thinking

Sartolab® RF|BT products are developed with a strong commitment to life cycle thinking, a holistic approach that comprehensively understands the environmental impacts of a product or service throughout its entire life cycle, from raw material extraction to end-of-life disposal. This approach, embraced by Sartorius, allows for a thorough assessment of environmental impacts and helps identify opportunities for improvement at each stage, thereby minimizing our environmental footprint and enabling us to offer sustainable and efficient solutions. The production of Sartolab® RF|BT products is a testament to this commitment, as sustainable practices are employed throughout the manufacturing process. This enables our customers to make environmentally-conscious choices, supporting our journey towards sustainability and contributing to a more environmentally-friendly world. By choosing Sartolab® RF| BT, you are not only opting for high-quality products but also supporting a sustainable future.



Raw Materials & Manufacturing

All Sartolab® RF|BT vacuum filtration Units are manufactured in an ISO 13485 certified plant and class 8 cleanroom to assure the highest level of purity. All Sartolab® RF|BT are produced on the same production line at Helsinki, Finland plant, which operates entirely on 100% renewable energy and utilizes energy saving technologies throughout the whole product manufacturing cycle.

Additionally, the use of modern technology, injection molding tools fitted with pressure sensors and quality control systems, enhances product quality, and minimizes production waste, with less than 5 % of total used plastics ending up as waste.

Material	
Funnel, lid, bottle	Polysterene (PS)
Tubing connector, funnel adaptor, screw cap	High Density Polyethylene (HDPE)
Membrane filter	Polyethersulfone (PES)
Packaging	Cardboard (PAP) PET|PE and PE|PA multilayer film

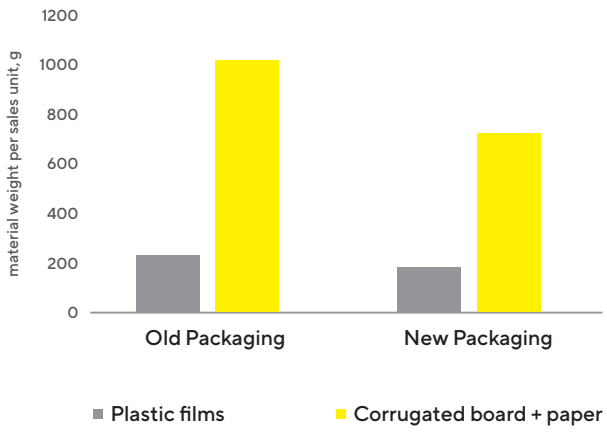
Packaging

Product packaging plays a crucial role in preserving product quality by protecting items from damage, contamination, and deterioration. However, it also contributes significantly to environmental waste. Sartorius is committed to creating product packaging that effectively protects products while minimizing environmental impact.

We have redesigned the Sartolab® RF|BT packaging for 150–250 mL products to be narrower, resulting in a 22 % reduction in use of plastic packaging film . We have also optimized our cardboard shipping boxes, reducing the cardboard material used per sales unit by approximately 11 %.

Our cardboard packaging, which accounts for 81 % of packaging weight, is 100 % recyclable and. partially sourced from recycling streams, contributing to sustainability by reducing waste and conserving natural resources. Furthermore, our revamped product packaging and box arrangement allow us to fit twice as many products per pallet (576 pcs vs 288 pcs) for some variants , enhancing our shipping efficiency and requiring less transports per product.

Figure 1.
Sartolab old vs new packaging for 150-250ml product variants



Distribution

In addition to modifying Sartolab® RF|BT product packaging, we have also made changes to optimize product transportation efficiency and to reduce CO_2 emissions. These changes include:

- Optimized palletizing: By positioning RF1000 boxes sideways on pallets, we can ship twice as many boxes per pallet.
- Transition to 50 % lighter wooden pallets (12 kg vs. 24 kg) Note: to avoid contamination risks, our pallets are made of virgin material and we do not use reusable pallets.
- Switch to 40 % thinner pallet stretch foil at our Helsinki, Finland plant (12µm thick foil instead of 20µm).

Sterilization is a crucial process for Sartolab® RF|BT products to ensure high purity operations. Recently we switched to another sterilisation provider. With the same level of sterilization quality this transition allowed us to optimize transportation logistics and brought approx. 30 % reduction of carbon footprint associated with truck distribution.

Less is More

EcoDesign

Less weight

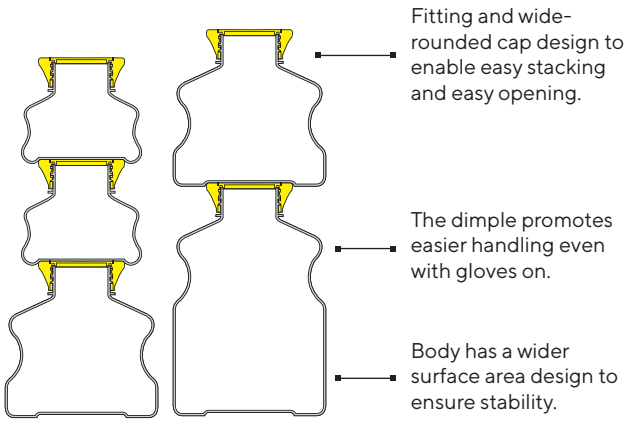
Fewer delivery trucks

Product Design

The shape of funnel allows them to be stacked inside each other. This design results in less volume in the bin, which is beneficial for customers who pay based on the volume of waste.

Below are the key product design features that enable efficient storage and help avoid product waste due to accidental tipping or dropping:

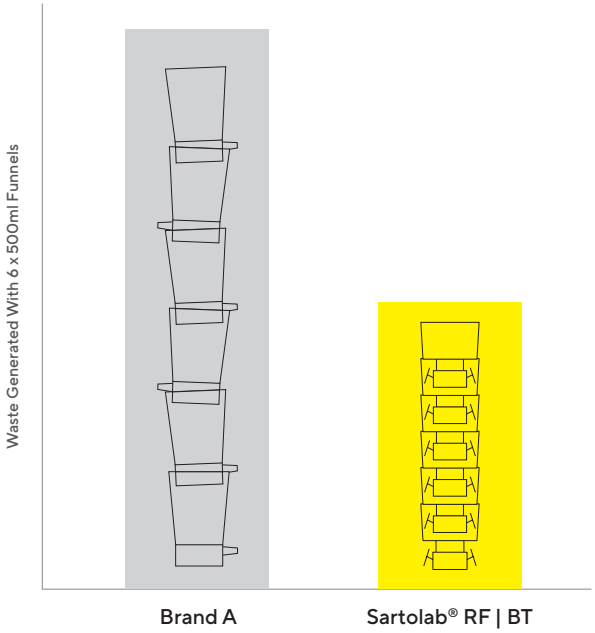
- Large bottles ensure stability during standalone filtration.
- Direct compatibility with the Sartolab® Multistation for easy sample manipulation.
- Packaging includes peel-offs at every corner for easy opening, even with gloves on.
- Packaging design features a finger hole for easy transportation of multiple units with one hand.
- Products are stackable, optimizing space in the fridge and the bin.
- Good visibility of graduation lines on funnels and bottles improves readability and user convenience.



Disposal

Sartolab products, due to their usage, are often categorized as biohazardous waste. However, key components like the bottle and receiver flask are made from polystyrene plastic, and the yellow bottle cap is made from HDPE, both of which have high recycling potential. If a Sartolab product hasn't been in contact with biohazardous substances, it can be disassembled and treated as plastic waste. This practice encourages responsible waste management and supports environmental sustainability.

How Much Space Does Your Waste Take?



Sustainability at Sartorius

Sartorius is committed to contributing to a future wheremore people have access to better medicine. At the sametime, we take on responsibility for the impacts of ouroperations wherever they occur. Taking into account theconcerns of its stakeholders,

Sartorius has defined six strategic sustainability topics:

- **Climate Action**
- **Resources and Circularity**
- **Water & Effluents**
- **Supply Chains**
- **Social Responsibility**
- **Corporate Governance**

For more information, visit:
www.sartorius.com/en/company/corporate-responsibility

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