



Arium[®] Bagtank

Innovative Water
Storage Solution

Simplifying Progress

SARTORIUS

Arium® Bagtank - Protecting Your Pre-Treated Water

Storage of pre-treated water, whether for direct use with water consuming systems or for further processing into Type 1 ultrapure water, is often an underestimated step. It plays a vital role in maintaining the high quality of the pre-treated water by protecting it from impurities found in the direct or indirect ambient environment.

Key Features of the Bagtank:

- Unique tank design, enabling reliable storage of Type 2 and Type 3 pure water
- Uses disposable Bag technology that is proven by the bio-pharmaceutical industry
- Easy to maintain - the Bag can be exchanged within five minutes
- Compatible with Arium® Smart Station Pure for Pure water dispensing directly from the Bagtank
- Offered in three different volumes: 20, 50 and 100 L



Arium® Bagtank - Reliable and Safe Intermediate Water Storage

An intermediate water storage is needed with water purification systems that use filter-based purification methods for producing pre-treated water. Filter-based purification methods, such as depth filters, RO membranes and EDI modules, slow down the production rate to such a degree that it would not be able to directly dispense water at a sufficient rate or pressure. The intermediate water storage system overcomes this problem by gathering and storing the pre-treated water in larger volumes until it is needed.

Arium® Bagtank Applications:

- Feed ultrapure water systems
- Feed laboratory devices e.g. glass washers, ice machines, autoclaves, etc.
- Dispense pure water directly from the Bagtank for rinsing, general, and other non-critical applications



Cleverly Combined Technology for Optimal Storage of Pure Water

When storing water, not only is the material that is in direct contact with the water decisive, but also the housing in which the water container is integrated.

It is crucial to take both aspects into account to achieve optimal water storage conditions and the highest user benefit.

With the Arium® Bagtank the housing has been designed for efficient space use and ability to deliver pure water where needed. The water itself is stored in our innovative Arium® Bag. With its high-quality material, the Bag minimizes the amount of downtime because of cleaning.



Housing of the Bagtank

- Square design for optimized use of space and integration into the lab
- The housing creates a dark environment to prevent microbiology growth in the storage Bag
- Available in three different volumes (20, 50 and 100 L) for customized pure water needs
- Offers quick connectors for water consuming systems and the Arium® Smart Station Pure remote dispenser



Features of the Arium® Bag

The Arium® Bag combined with the Bagtank housing ensures that the stored pure water is kept at a high quality.

The material of the Bag, known as S71, is flexible, robust and durable, and its quality has been proven during use in the highly demanding bio-pharmaceutical industry.



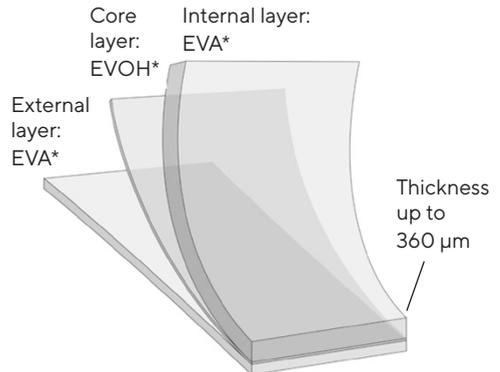
Position	Description
1	Vent filter with implemented check valve, for safe and proper degassing
2	Robust, S71 high-quality film material for reliable water storage over time
3	Quick connectors for fast and easy installation

S71 - The Chosen Material for the Arium® Bag

The S71 EVA film of Arium® Bags is the result of combining material science and film extrusion expertise in collaboration with our film partners. Such partnerships ensure a full understanding of the film manufacturing process.

Key Features:

- Heat laminated EVA/EVOH/EVA structure
- Up to 360 µm total layer thickness
- High robustness based on the film strength and film flexibility
- High gas and water barrier properties for optimized temporary water storage
- Low extractable profiles



*EVA: Ethylene Vinyl Acetate Copolymer

**EVOH: Ethyl Vinyl Alcohol

Material Science and Film Extrusion Expertise

Building on more than 20 years of experience in Single-use Fluid Management solutions, Sartorius have not only established proven designed products for bioprocessing, but also for single stand-alone water purification systems used in R&D and QC labs.

The quality of Arium® Bags is based on the complete control of our manufacturing process for the film, the filters and the assembling.

We have established the resin specification, extrusion design space and process controls that provide consistent quality and reproducible characteristics of the S71 film.

Buffer Formulation



Pre-designed solutions for storage of buffers used for purification or final formulation

Drug Substance Purification



Pre-designed solutions for storage of drug substance

Drug Project Formulation



Pre-designed solutions for sterile filtration, hold and transfer of drug products

Save Time and Water During Cleaning

In contrast to typical PE water storage tanks, the Arium® Bagtank uses exchangeable Bags, reducing the maintenance downtime to a minimum (see Figure 1).

Instead of using chemicals, which require a long exposure time in the tank, followed by multiple time

intensive rinsing cycles, the empty Arium® Bag is simply replaced within five minutes.

Finally, by exchanging the Bags, you ensure that the accumulation of impurities over time (typically seen in the critical upper part of PE tanks) is avoided.

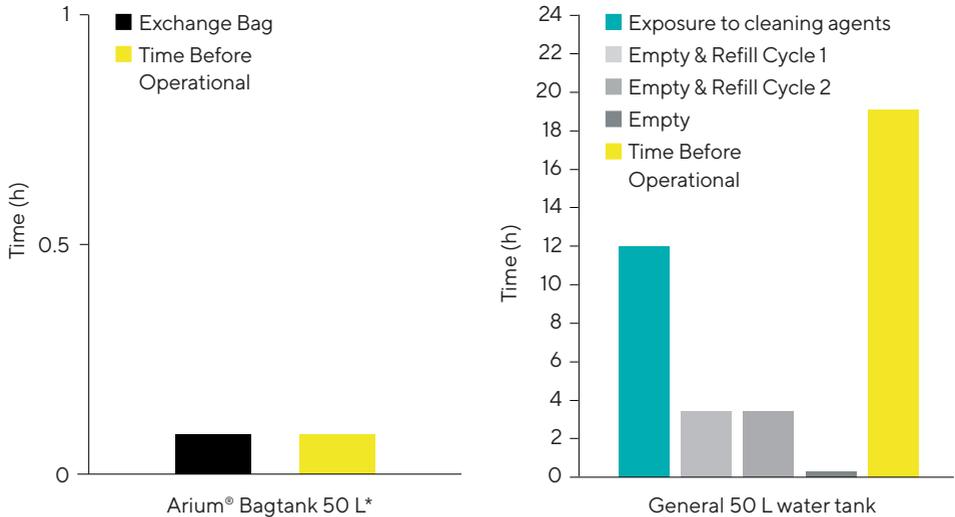


Figure 1: Cleaning downtime of Arium® Bagtank 50 L and a 50 L PE water tank

Note. Downtimes of a 50 Liter Bagtank compared to a 50 L PE Tank, when used for non-critical applications. The water storage tanks are connected to a RO system with a flow rate of 16 L/h and are drained with 3 L/h.

Choosing the Right Bagtank Size

When choosing a water storage tank, you will need to consider which size would be the right choice. An under-sized tank might not provide enough water to meet your consumption needs, whereas an oversized tank may impact the stored water quality over time.

Furthermore, the production flow rate of your pre-treatment system will also have an impact on the choice.

The Bagtank, together with the production flow rate of the pre-treatment system, needs to cover both your maximum peak of water usage as well as the total daily water consumption needs.





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CMW

ARIUM COMFORT

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0.07 g
21.0 °C

ARIUM®

Flexible Water Dispensing with Arium® Smart Station

For manual or volume-controlled pure water dispensing directly from the Arium® Bagtank, connect an Arium® Smart Station Pure.

The Smart Station is designed for flexible remote dispensing of pure water directly at the point of use. While dispensing water into a broad range of different-sized containers, the Smart Station offers constant control of all important quality parameters. The ergonomic design supports left- and right-hand operation and can be easily adjusted to your needs. Using the extended connection tubing, the distance between the Smart Station and the Arium® Bagtank can be set up to four meters. Based on your needs, different filters can be added.



Sartorius Service Solutions

Sartorius supports you during the entire lifetime of your water purification system. Your Bagtanks are maintained during every service visit for the entire Arium® Advance or Comfort system.

Our trained and experienced application and service specialists understand the full range of your applications and can give you well-founded technical advice in accordance with all legal requirements.

Sartorius offers individual services and maintenance options and contracts tailored to your specific requirements.



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