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arium® Water Purification Systems

turning science into solutions

The New arium® Systems: Water Purification with

Have you ever wanted application-focused operating features to make your daily lab routine work easier and your workflows faster and more reliable? Do you place a premium on having your equipment run cost-effectively over the medium and long term. Have you ever looked for a system that can be ideally integrated into your existing laboratory environment, that can grow right along with your requirements and that offers you the greatest possible flexibility? Then you cannot afford to pass up the new arium® water purification systems.

A choice of more than 70 arium® versions is available to meet all your requirements on water quality and to cover any application. The arium® bagtanks and the innovative iJust function specially matched to these versions enable significantly more cost-effective water usage and efficient operation of these water purification systems than do conventional units. All arium® systems are already certified when delivered. Plus, we offer equipment qualification and maintenance as supplementary services to considerably extend their uses even further.

Added Value


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arium bagtank 20
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arium bagtank 50
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arium bagtank 100
EDI

Reliability Thanks to the Best Water Quality

Water quality that meets, and exceeds, the ASTM Type 1 Standard and TOC levels of ≤ 2 ppb ensure reproducible results, even in mission-critical applications, such as cell cultivation and chromatography.

Innovative arium® bagtank System for Time Savings and User Safety

Pure water is stored in the closed arium® bagtank system, which reliably protects purified water from secondary contamination. This ensures consistently high water quality and, therefore, reproducible results.

Unlike conventional water storage tanks, the arium® bagtank system saves time as the arium® bag is so easy to change out. At the same time, it increases user safety because it eliminates the need for time-consuming and labor-intensive cleaning procedures using chemicals that are hazardous to your health. The rollers on the arium® bagtank let you move it fast and conveniently to wherever you need to use it.

Easy Operation Using Touch-Screen Functions

You name, from adjusting basic settings to dispensing water, all functions of the arium® can be controlled by touch screen. Navigate intuitively through the logically and clearly arranged user interface – even while wearing gloves. Virtually real-time updates of measured data, flow charts and warning messages are displayed at all times.

You can choose how you want to have pure water dispensed, either manually or automatically. Accurate volume dispensing ensures smooth workflows in your lab.

Less Waiting Means More Cost Savings

Consumables, i.e., the filter cartridges, can be quickly and easily changed out. This reduces maintenance and downtime to a minimum.

Optimized Water Usage with iJust

The clever iJust feature automatically optimizes product water quality and water usage. Its intelligent software controls a valve on the concentrate drain based on the data measured for $CaCO_3$ and CO_2.

The advantages:
- Ensures more economical water usage
- Provides the highest product water quality at all times
- Extends the life of downstream water purification systems

More Flexibility

Whatever you specific application, the arium® system will give you unlimited freedom and flexibility. Its display is always at eye level, and the dispensing outlet is always positioned right there where you need it. Plus, the system integrates perfectly into your given space requirements in the lab.

Benchtop Unit

Space-saving, compact design; water is dispensed directly at the display level.

Remote Dispenser with Stand

The remote dispenser features an ergonomic design. Moreover, its height can be adjusted by up to 70 cm (around 30 inches = more than 2 feet). Both of these features enable you to work effortlessly using just one hand. The extended tube guide lets you expand your work area by 3.7 m, or more than 12 ft. This remote dispenser can be used in combination with all benchtop, wall-mounted and built-in units.

Wall-Mounted Unit

The wall-mounted unit saves valuable space on your lab benchtop. The display and dispensing unit are positioned at the bottom to ensure user-friendly, ergonomic operation.

Built-in Unit

This version saves space on and above your lab bench. You can choose to mount both the display and water dispensing units on a wall or on a multi-functional stand.

Remote Dispenser with Wall-mounting Plate

This ergonomically designed and easy-to-use remote dispenser is simply mounted on a wall to save space. It is suitable for all benchtop, wall-mounted and built-in units.

Multifunctional Stand

This convenient stand combines a design that allows unlimited access to all display and dispensing functions and flexibility provided by its height that is adjustable by up to 70 cm (around 30 inches).

Exactly the Right System – Always

A selection of more than 70 different variants offers tailor-made solutions without any compromises for all applications.

Features

iJust
Optimized product water quality and water usage; extends the life of downstream ultrapure water systems

arium® bagtank System
Reliable protection against secondary contamination; easy change-out of the arium® bag saves time; user protection as it eliminates the need for hazardous cleaning chemicals

Display with Touch-screen Functions
Clearly organized user interface featuring intuitive navigation; continuous display of measured data and warning messages

High-quality Features
Integrated feed water conductivity measurement a standard feature; integrated pressure controller, integrated space for depositing utensils, and many more convenient features

Maximum System Flexibility
A variety of hardware configurations; operating and dispensing unit can be flexibly positioned; easy and space-saving integration

The Highest Water Quality
Meets and exceeds ASTM Type 1; excellent retention rates for RNases, DNases and endotoxins, and reduces TOCs; ideal for demanding biological and analytical applications, such as cell cultivation and chromatography

SOP Monitoring
Graphic and acoustic signals for displaying maintenance prompts, alarm messages when limits are exceeded or data fall below minimum limits as well as maintenance interval prompts

Type of Water

ASTM Type 1

Type 2

Type 3

arium® comfort Series

Combined pure and ultrapure water systems

arium® pro Series

Ultrapure water systems; any application-specific configuration can be selected.

arium® advance Series

Pure water systems

✓			✓
✓			✓
✓		✓	✓
✓		✓	✓
✓		✓	✓
✓		✓	
✓		✓	✓

comfort I and comfort II	All arium® pro units	
comfort II		advance EDI
comfort I		advance RO

arium® comfort II

The arium® comfort II is a combined system for producing ASTM Type 1 ultrapure water and Type 2 pure water. This system features the latest EDI technology and a unique filter cartridge for providing ultrapure water of the highest quality. The arium® comfort II delivers consistently high-grade water quality at rates of up to 120 l/h. The quality of this water even exceeds the ASTM Type 1 specifications.

Applications

- HPLC
- GC-MS, AAS, ICP-MS
- Ion chromatography
- TOC analysis
- Photometry
- Microbiological media and reagents
- Histology
- ELISA, RIA
- Buffers and pH solutions
- Feed water for laboratory devices, such as autoclaves, glassware washers, humidifiers, water baths etc.

Water Quality

- Conductivity for Type 1: 0.055 µS/cm (≅ 18.2 MΩ × cm)
- Typical conductivity for Type 2: 0.2–0.07 µS/cm (≅ 5–15 MΩ × cm)
- TOC content for Type 1: ≤ 2 ppb
- Microorganisms: < 1 CFU/1,000 ml
- Particles: < 1/ml

The system's integrated UV lamp (185 | 254 nm) prevents microbiological growth and reduces the TOC content to a minimum. The current TOC value is continuously checked by an integrated TOC monitor specially developed for this ultrapure water system and is continuously displayed. Moreover, arium® comfort II delivers Type 2 pure water at rates of up to 10 l/h. As it uses the most advanced EDI technology, this water is electochemically desalted. Upstream RO modules with low-energy TFC reverse osmosis membranes and a pretreatment cartridge result in the highest ion retention rates. Both types of water ware practically free of microorganisms when a Sartopore® 2 150 final filter is used.

Features

Safe
TOC content ≤ 2 ppb for reproducible results; continuously updated TOC readings can be conveniently viewed on the display

Reliable
Consistently high Type 2 water quality thanks to the most advanced EDI technology used

Efficient
Optimized water usage ensured by intelligent iJust feature

Easy
Glass display with touch-screen functions and intuitive menu navigation

Flexible
Adapts to any laboratory environment thanks to flexible positioning of the system, control unit and dispensing unit

Space-saving
Compact design saves valuable work space

arium® comfort I

The arium® comfort I is a combined system for producing ASTM Type 1 ultrapure water and Type 3 pure water. The system features the latest reverse osmosis technology and a unique filter cartridge for producing ultrapure water of the highest quality. The arium® comfort I delivers consistently high-grade water quality at rates of up to 120 l/h. The quality of this water even exceeds the ASTM Type 1 specifications.

Applications

- HPLC
- GC-MS, AAS, ICP-MS
- Ion chromatography
- TOC analysis
- Photometry
- Buffers and pH solutions
- Feed water for laboratory devices, such as autoclaves, glassware washers etc.

Water Quality

- Conductivity for Type 1: 0.055 µS/cm (≅ 18.2 MΩ × cm)
- Typical conductivity for Type 3: < 20 µS/cm (≅ 0.05 MΩ × cm)
- TOC content for Type 1: ≤ 2 ppb
- Microorganisms: < 1 CFU/1,000 ml
- Particles: < 1/ml

The system's integrated UV lamp (185 | 254 nm) prevents microbiological growth and reduces the TOC content to a minimum. The current TOC value is continuously checked by an integrated TOC monitor specially developed for this ultrapure water system and is continuously displayed. Moreover, arium® comfort I delivers Type 3 pure water at rates of 8 or 16 l/h. The feed water is purified by a pretreatement cartridge and downstream RO modules; continuous permeate backflushing effectively prevents scaling right from the start. Both types of water are practically free of microorganisms when a Sartopore® 2 150 final filter is used.

Features

Safe and reliable
TOC content ≤ 2 ppb for reproducible results; continuously updated TOC readings can be conveniently viewed on the display

Practical
SD card slot supports documentation

Efficient
Optimized water usage ensured by intelligent iJust feature

Easy
Glass display with touch-screen functions and intuitive menu navigation

Flexible
Adapts to any laboratory environment thanks to flexible positioning of the system, control unit and dispensing unit

Space-saving
Compact design saves valuable work space

Type 1 Water

arium® pro Ultrapure Water Systems

The arium® pro series consist of flexible systems with device configurations that can be specially custom-tailored to your applications and feature an outstanding cost-benefit ratio.

All systems meet and exceed ASTM Type 1 water quality and ensure the best, reproducible results. Per hour, an arium® pro can deliver up to 120 l of ultrapure water with a conductivity of 0.055 µS/cm (≙ 18.2 MΩ × cm) and consistently high quality.

If a Sartopore® 2 150 final filter is used, arium® pro will deliver ultrapure water that is practically free of microorganisms.

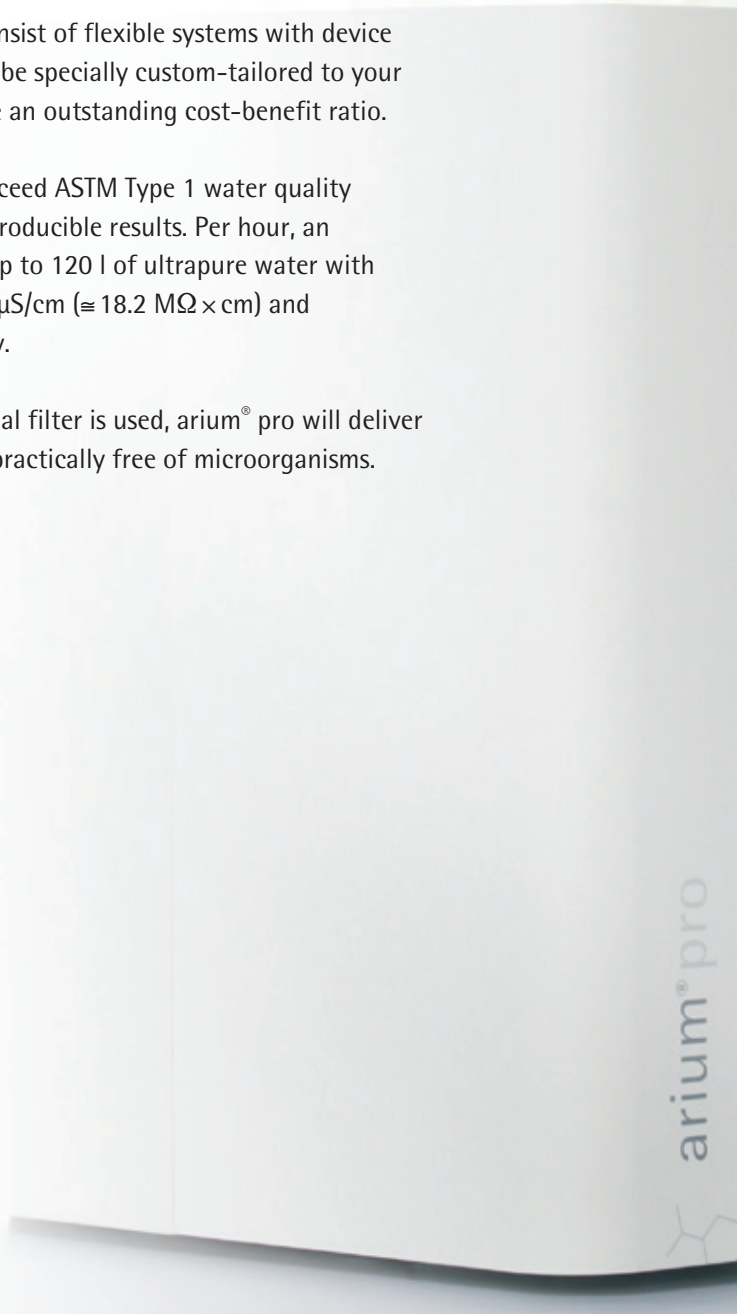
Features

Complete range
Five systems specially customized to meet your specific applications

Flexible
Adapts to any laboratory environment thanks to flexible positioning of the system, control unit and dispensing unit

Easy
Glass display with touch-screen functions and intuitive menu navigation

Practical
SD card slot supports documentation

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V TOC

Type 1 Water

arium® pro

The arium® pro is an especially affordable system that focuses on key functions and produces ultrapure water with uncompromising quality.

Standard Applications

- AAS, ICP-MS
- Ion chromatography
- Preparation of reagents
- Photometry

Water Quality

- Conductivity: 0.055 µS/cm (≅ 18.2 MΩ × cm)
- TOC content: < 5 ppb
- Microorganisms: < 1 CFU/1,000 ml
- Particles: < 1/ml

arium® pro DI

The arium® pro DI delivers ultrapure water for standard applications of any kind. The Elemental Kit comprising a set of cartridges reliably removes organic and inorganic components; the TOC content of ultrapure water produced is < 5 ppb.

Standard Applications

- AAS, ICP-MS
- Ion chromatography
- Preparation of reagents
- Photometry

Water Quality

- Conductivity: 0.055 µS/cm (≅ 18.2 MΩ × cm)
- TOC content: < 5 ppb
- Microorganisms: < 1 CFU/1,000 ml
- Particles: < 1/ml

arium® pro UV

In arium® pro UV, the Analytical Kit cartridges reliably retain organic and inorganic components. The system's integrated UV lamp (185 | 254 nm) prevents microbiological growth and permits TOC values of ≤ 2 ppb.

The current TOC value is continuously checked by the optionally integrated TOC monitor and shown on the display.

Chemical-Analytical Applications

- HPLC
- GC-MS, AAS, ICP-MS
- Ion chromatography
- TOC analysis
- Photometry

Water Quality

- Conductivity: 0.055 µS/cm (≅ 18.2 MΩ × cm)
- TOC content: ≤ 2 ppb
- Microorganisms: < 1 CFU/1,000 ml
- Particles: < 1/ml

arium® pro UF

In arium® pro UF, the Biological Kit cartridges reliably remove organic and inorganic components. The system's integrated ultrafilter module ensures that the product water does not contain any endotoxins, RNA | DNA or DNases and RNases.

The arium® pro UF delivers ultrapure water of consistently high quality and offers ideal conditions to ensure the reliability of critical biological results.

Chemical-Analytical and Biological Applications:

- AAS, ICP-MS
- Ion chromatography
- Electrophoresis
- Endotoxin analysis
- Immunocytochemistry
- Nutrient media for cell culture
- Production of monoclonal antibodies
- Photometry

Water Quality

- Conductivity: 0.055 µS/cm (≙ 18.2 MΩ × cm)
- TOC content: < 5 ppb
- Endotoxins: < 0.001 EU/ml
- RNases: < 0.004 ng/ml
- DNases: < 0.024 pg/µl
- Microorganisms: < 1 CFU/1,000 ml
- Particles: < 1/ml

arium® pro VF

This high-end arium® pro VF unit delivers constantly high ultrapure water quality. Its integrated UV lamp (185 | 254 nm) and hollow-fiber ultrafilter module not only prevent microbiological growth and reduce the TOC content to ≤ 2 ppb, but also remove endotoxins, microorganisms, RNA | DNA and DNases and RNases.

This system is the ideal solution for all critical applications in your laboratory.

Chemical-Analytical and Biological Applications

- HPLC
- GC-MS, AAS, ICP-MS,
- Ion chromatography
- TOC analysis
- PCR
- Electrophoresis
- Endotoxin analysis
- Immunocytochemistry
- Nutrient media for cell culture
- Production of monoclonal antibodies
- Photometry

Water Quality

- Conductivity: 0.055 µS/cm (≙ 18.2 MΩ × cm)
- TOC content: ≤ 2 ppb
- Endotoxins: < 0.001 EU/ml
- RNases: < 0.004 ng/ml
- DNases: < 0.024 pg/µl
- Microorganisms: < 1 CFU/1,000 ml
- Particles: < 1/ml

arium® advance EDI

The arium® advance EDI delivers Type 2 water of consistently the best quality at rates of up to 10 l/h. The system attains the highest retention rates of ions along with optimal water yield, and reliably removes oxidants, heavy metal ions and particulates from feed water. The pure water produced is stored in arium® bagtank systems and, if a Sartopore® 2 150 final filter is used in the system, is practically free of microorganisms.

Standard Applications

- Microbiological media and reagents
- Solutions for chemical analysis and synthesis
- Histology
- ELISA, RIA
- Buffers and pH solutions
- Feed water for various laboratory devices, such as autoclaves, glassware washers, etc.

Water Quality

- Typical conductivity: 0.2–0.07 µS/cm (≅ 5–15 MΩ × cm)
- Microorganisms: < 1 CFU/1,000 ml
- Particles: < 1/ml

Features

Safe and reliable
Consistently high Type 2 water quality based on the most advanced EDI technology

Efficient
Optimized water usage ensured by intelligent iJust feature

Easy
Glass display with touch-screen functions and intuitive menu navigation

Time-saving
Thanks to the arium® bagtank system

arium® advance RO

The arium® advance RO delivers Type 3 water of consistently the best quality at rates of 8 or 16 l/h. The system attains the highest retention rates of ions along with optimal water yield, and reliably removes oxidants, heavy metal ions and particulates from feed water. The pure water produced is stored in arium® bagtank systems and, if a Sartopore® 2 150 final filter is used in the system, is practically free of microorganisms.

Standard Applications

- Buffers and pH solutions
- Feed water for various laboratory devices, such as autoclaves, glassware washers, humidifiers, water baths etc.

Water Quality

- Typical conductivity: < 20 µS/cm (≅ 0.05 MΩ × cm)
- Microorganisms: < 1 CFU/1,000 ml
- Particles: < 1/ml

Features

Efficient
Optimized water usage ensured by intelligent iJust feature

Easy
Glass display with touch-screen functions and intuitive menu navigation

Time-saving
Thanks to the arium® bagtank system