

Manufacturing Waters adhering to global standards. Serving - science, labs, technology and engineering sectors worldwide

Type I ASTM ultrapure laboratory reagent water is engineered for the most demanding applications.

It is used across a range of disciplines, from life sciences and molecular diagnostics to analytical chemistry and materials research.

Ideal for high-precision applications such as HPLC/UPLC, LC-MS/MS, ICP-MS, GC-MS, molecular biology and genomics workflows, cell and tissue culture, as well as semiconductor, microelectronics and critical surface cleaning processes.

Each batch undergoes rigorous quality control and is produced in accordance with ASTM D1193 Type I specifications.

PARAMETER / GRADE	I	A	B	C
Conductivity $\mu\text{S/cm}$	0.0555	0.0555	0.0555	0.0555
Resistivity $\text{M}\Omega$	18	18	18	18
pH	-	-	-	-
TOC $\mu\text{g/L max}$	50	50	50	50
Sodium $\mu\text{g/L max}$	1	1	1	1
Chloride $\mu\text{g/L max}$	1	1	1	1
Total Silica $\mu\text{g/L max}$	3	3	3	3
HBC cfu/mL max	-	10/1000	10/100	100/10
Endotoxin EU/mL	-	0.03	0.25	-
CAS Number	7732-18-5			
Shelf Life	6 months when unopened and stored between 2°C and 18°C in a dark environment			

Data accurate at manufactured fill point.

FOR WHEN CONSISTENT WATER PURITY, FAST DELIVERY AND PRICE MATTER.

- ✓ UK Manufacturer
- ✓ Fast - Just in time deliveries
- ✓ No Chemical Additives
- ✓ Extensive Formulated Range
- ✓ Batch Traceability
- ✓ Manufactured in ISO-certified purpose built facilities

OPTIONS:

- ✓ Application specific cap solutions
- ✓ In volumes to meet your needs from 10ml to 27,000L
- ✓ Ultrafast Emergency Service Available

- ✓ Bespoke Formulation Capability
- ✓ Nitrogen & Ozone Flushing
- ✓ Gamma Irradiation
- ✓ Non-Standard container types to suit your requirements



Call or email to discuss your ultrapure water requirements

T. +44(0)1942 914 007 E. sales@waternation-scientific.co.uk W. www.waternation-scientific.co.uk
Unit 18, Heron Business Park, Tan House Lane, Widnes WA8 0SW

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ASTM Type II laboratory reagent water provides purity for routine and advanced analytical workflows where controlled conductivity and low levels of ionic, organic, and microbial contamination are essential.

It is used across a range of disciplines, from life sciences, clinical and analytical chemistry, microbiology and materials testing facilities requiring controlled process water.

It is ideal for applications requiring reliable high-purity process water and instrument feedwater.

Each batch undergoes rigorous quality control and is produced in accordance with ASTM D1193 Type II specifications.

PARAMETER / GRADE	II	A	B	C
Conductivity $\mu\text{S/cm}$	1	1	1	1
Resistivity $\text{M}\Omega$	1	1	1	1
pH	-		-	-
TOC $\mu\text{g/L max}$	50	50	50	50
Sodium $\mu\text{g/L max}$	5	5	5	5
Chloride $\mu\text{g/L max}$	5	5	5	5
Total Silica $\mu\text{g/L max}$	3	3	3	3
HBC cfu/mL max		10/1000	10/100	100/10
Endotoxin EU/mL	-	0.03	0.25	-
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ASTM Type III water provides dependable, cost-effective purity for high-volume and general laboratory operations, where reduced levels of dissolved solids and microbial contamination are required but ultra-high purity is not necessary.

It is used across research, teaching and clinical support laboratories, pharmaceutical and biotechnology facilities, medical and veterinary laboratories, and other high-technology environments requiring pre-treated water for equipment and general laboratory functions.

Ideal for applications such as supply to automated glassware washers, feedwater for autoclaves, pure steam generators and allied industrial applications.

It is not intended for analytical measurements, reagent preparation or buffer preparation.

Each batch undergoes rigorous quality control and is produced in accordance with ASTM D1193 Type III specifications.

PARAMETER / GRADE	III	A	B	C
Conductivity $\mu\text{S}/\text{cm}$	0.25	0.25	0.25	0.25
Resistivity $\text{M}\Omega$	4	4	4	4
pH	-	-	-	-
TOC $\mu\text{g}/\text{L}$ max	200	200	200	200
Sodium $\mu\text{g}/\text{L}$ max	10	10	10	10
Chloride $\mu\text{g}/\text{L}$ max	10	10	10	10
Total Silica $\mu\text{g}/\text{L}$ max	500	500	500	500
HBC cfu/mL max	-	10/1000	10/100	100/10
Endotoxin EU/mL	-	0.03	0.25	-
CAS Number	7732-18-5			
Shelf Life	6 months when unopened and stored between 2°C and 18°C in a dark environment			

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ASTM Type IV water provides practical, economical pre-treated water quality for general laboratory and technical operations, where reduction of hardness, chlorine, particulates and microbial load is required but analytical-grade purity is not needed.

It is used in research and teaching laboratories, pharmaceutical and biotechnology support areas, industrial R&D laboratories and maintenance facilities where improved water quality is required for routine tasks and equipment protection.

It is ideal for use in non-critical condensers and cooling circuits where mains water is unsuitable, and as primary feedwater to reverse osmosis, deionisation or distillation systems producing ASTM Type III, Type II or Type I water.

Each batch undergoes rigorous quality control and is produced in accordance with ASTM D1193 Type IV specifications.

PARAMETER / GRADE	IV	A	B	C
Conductivity $\mu\text{S}/\text{cm}$	5	5	5	5
Resistivity $\text{M}\Omega$	0.2	0.2	0.2	0.2
pH	5.8	5.8	5.8	5.8
TOC $\mu\text{g}/\text{L}$ max	-	-	-	-
Sodium $\mu\text{g}/\text{L}$ max	50	50	50	50
Chloride $\mu\text{g}/\text{L}$ max	50	50	50	50
Total Silica $\mu\text{g}/\text{L}$ max	-	-	-	-
HBC cfu/mL max	-	10/1000	10/100	100/10
Endotoxin EU/mL	-	0.03	0.25	-
CAS Number	7732-18-5			
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Nuclease-free molecular biology grade water is a fundamental reagent for work with genetic material.

It is highly purified RNase- and DNase-free water for sensitive nucleic acid applications, with very low ionic and organic contamination and controlled endotoxin levels to prevent non-specific degradation of RNA and DNA.

Ideal for applications such as preparation and dilution of DNA and RNA samples, reconstitution of oligonucleotides, primers, probes and enzymes, preparation of PCR, qPCR and RT-qPCR master mixes, cDNA synthesis and high-throughput sequencing or other nucleic acid-based workflows.

Each batch undergoes rigorous quality control, with routine testing for RNase, DNase, genomic DNA and endotoxin; see specification chart for full details.

PARAMETER / GRADE	
Appearance	Clear and colourless
pH (25° C)	-
Conductivity $\mu\text{S}/\text{cm}$	<0.1
Resistivity $\text{M}\Omega/\text{cm}$	>10
Total Organic Carbon μ/L	<10
Endotoxin Level EU/mL	<0.25
Sterility	Sterile
RNase Activity	None Detected
DNase Activity	None Detected
Protease Activity	None Detected
CFU/mL	<1
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PFAS-free water provides a high-purity reagent grade with no detectable PFAS, specifically intended for trace and ultra-trace determination of per- and polyfluoroalkyl substances where background contamination from the water itself must be negligible.

It is used in environmental monitoring laboratories, water and wastewater testing facilities, food and beverage safety laboratories, contract analytical laboratories and governmental or regulatory laboratories that require the lowest possible detection limits for PFAS in drinking water, wastewater, surface and groundwater, soil, biota, and finished products such as food, beverages and packaging materials.

Each batch undergoes rigorous quality control, with LC-MS/MS screening to confirm non-detection of PFAS; see specification chart.

PARAMETER / GRADE	
Resistivity MΩ/cm	>18
TOC µg/ L	<5
Particulates µm	<0.2
pH	-
Bacteria CFU/100mL	<1
Endotoxin EU/mL	<0.03
Total PFAS Species ng/L	<5
Individual PFAS (PFOA, PFOS,PFHxS, PFNA,PFHpA, PFDA) ng/L	<1
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- ✓ **Fast - Just in time deliveries**
- ✓ **No Chemical Additives**
- ✓ **Extensive Formulated Range**
- ✓ **Batch Traceability**
- ✓ **Manufactured in ISO-certified purpose built facilities**

OPTIONS:

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**ANALYTICAL, ULTRA-HIGH PURITY, REAGENT GRADES, AND CUSTOM FORMULATIONS
PROTECTING YOUR RESULTS | BRAND | BATCHES | DEADLINES | PROFITS & EQUIPMENT**

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EN ISO 3696 laboratory water provides cost-effective purified water for general laboratory support functions such as washing, rinsing and equipment feed, where reduced hardness, dissolved solids and microbial load are required. It is not intended for analytical measurements or for the preparation of reagents, buffers or culture media.

Typical application are research and teaching laboratories, clinical support, hospital sterilisation units and in pharmaceutical, cosmetics, food and beverage and industrial quality control.

Each batch undergoes rigorous quality control and is produced in accordance with EN ISO 3696:1995 specifications.

PARAMETER / GRADE	1	2	3
pH @ 25° C Including range	Not applicable	Not applicable	5 to 7.5
Conductivity mS/m Max	0.01	0.1	0.5
Oxidizable matter mg/L max	Not applicable	0.08	0.4
Absorbance at 254nm and 1 cm Optical path length absorbance units Max	0.001	0.01	Not specified
Residue on evaporation after heating at 110° C mg/kg Max	Not applicable	1	2
Silica(SiO2) content mg/L Max	0.01	0.02	Not specified
CAS Number	7732-18-5		
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Custom-formulated purified water for scientific, technical and industrial use.

Our bespoke purified water is designed to meet precise user-defined specifications. It is for applications where standardised grades are unsuitable. It offers tailored purity and composition, configured to match the specific chemical, microbiological, physical or packaging requirements.

Ideal for applications where specific conductivity, pH, buffering capacity, antimicrobial treatment, sterility, particulate levels or packaging formats must be controlled to user-defined parameters - including custom water for reagent systems, calibration and dilution protocols, microbiological or stability testing, production line integration, and environmental simulation.

Each formulation is manufactured under controlled conditions with full documentation of agreed parameters, testing methods and specification limits. Batch-specific certificates and full traceability are provided as standard.

Typical Customisation Options

- ◆ Conductivity ranges (e.g. 0.1–0.3 $\mu\text{S}/\text{cm}$)
- ◆ pH-adjusted purified water (e.g. pH 4.5 ± 0.5)
- ◆ Buffered solutions (e.g. phosphate, citrate)
- ◆ Antimicrobial additives (e.g. sodium azide, ethanol)
- ◆ Custom volumes and container types
- ◆ Labelled and barcoded to customer specification

Packaging & Delivery

Bespoke water products can be supplied in a wide range of container formats. We support both single-use and reusable packaging, with sterile or non-sterile options. Custom labelling, QR coding and documentation can be incorporated to meet client-specific handling and compliance needs.

Technical Collaboration

Our scientific and production teams work directly with clients to define specifications, acceptance criteria, test methods and packaging solutions tailored to each application. This collaborative approach ensures the water meets its intended performance, compliance and operational requirements.

Quality Control & Certification

All custom water products are produced using validated purification processes and documented manufacturing controls. Batches are tested against defined specifications agreed with the client, and Certificates of Analysis are provided for every batch. Full traceability and documentation are maintained.

Talk to a formulation specialist

Let us help you define the right water specification for your application.

Email: sales@watnation-scientific.co.uk or Telephone: +44(0)1942 914 007



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