

## Clean Water for Quality Results: Rely on Our Water Systems

Water systems are an essential part of any modern laboratory where reliable water purification is required. Laboratory water plays a crucial role in scientific research, as its quality directly impacts the results of experiments, analyses, and production processes. Let's explore the importance of high-quality water in laboratories, the types of Watrex water systems, and their applications in the laboratory environment.

Clean water for  
accurate results.  
Trust our water  
systems!



Watrex: Introductory photo

### The Importance of Water Quality in the Laboratory

Water is used in a wide range of laboratory operations, from preparing solutions and media, to washing laboratory glassware, and in specific analytical methods such as HPLC (High-Performance Liquid Chromatography), ICP-MS (Inductively Coupled Plasma Mass Spectrometry), or PCR (Polymerase Chain Reaction). High-quality water is essential for achieving reproducible and accurate results, as any contamination can lead to errors in experiments, resulting in loss of time, resources, and sometimes even damage to sensitive equipment.

### Classification of Laboratory Water

Laboratory water is typically classified into several grades based on its level of purity:

- 1. Deionized Water (DI Water):** This water has been treated using mixed-bed ion exchangers, which remove most ionic contaminants. It is often used in less sensitive applications, such as washing glassware and preparing certain solutions.
- 2. Reverse Osmosis Water (RO Water):** This type of water is purified through reverse osmosis, a process that removes up to 99% of dissolved salts and organic substances. RO water is suitable for many laboratory applications but may require further purification for higher purity in some cases.
- 3. Ultrapure Water (UP Water):** This is the highest grade of water purity, achieved through a combination of methods including deionization, reverse osmosis, ultrafiltration, and UV sterilization. UP water is essential for applications where even minimal contamination could affect results, such as in liquid chromatography, molecular biology, or pharmaceutical research.

### Types of Watrex Water Systems for Laboratories

SCI-AQUA ROWAPUR	SCI-AQUA ULTRAPUR	SMART PUV	SMART PLUS N
			
Reverse Osmosis Systems	Ultrapure Water	Ultrapure Water	Ultrapure Water

Watrex: Figure 1: Overview of water systems

1. **SCI-AQUA ROWAPUR:** SCI-AQUA ROWAPUR systems are simple and economical, making them ideal for laboratories. They use reverse osmosis to purify water, removing a wide range of contaminants including ions, organic substances, and bacteria. These systems are suitable for laboratories with higher water quality requirements and are often used as the first step in the water purification process.
2. **SCI-AQUA ULTRAPUR SMART PUV and SMART PLUS N:** These systems combine several water purification methods to achieve maximum purity. In addition to removing ions and organic substances, they also eliminate bacteria, endotoxins, DNases, and other contaminants. These systems are crucial for applications requiring the highest possible water purity.

### Installation and Maintenance of Water Systems

Proper installation and maintenance of water systems are essential for ensuring their long-term reliability and efficiency. The Watrex specialized service team offers comprehensive services, including regular maintenance, rapid filter replacement, system calibration, effectiveness verification, and overall equipment functionality checks. Additionally, we provide extensive training for laboratory personnel to ensure that the systems are used and maintained correctly. With Watrex's expert approach and quick response, you can be confident that your laboratory water systems will always be in optimal condition, ready to support your research.

### Conclusion

With increasing demands for accuracy and reliability in scientific results, the importance of high-quality water systems for laboratories will continue to grow. The choice of the right system depends on the specific needs of the laboratory, the required water purity, and the available financial resources. Rely on Watrex water systems to ensure that your results are always accurate and reliable.

For more information or a non-binding quote, please contact us at [watrex@watrex.com](mailto:watrex@watrex.com) or visit our website at [www.watrex.com](http://www.watrex.com)