



## High purity water purifiers with various water treatment processes and production volume for different laboratory needs

### ■ Pure water and ultra pure water

Besides H<sub>2</sub>O, tap water contains various impurities which need to be removed to prevent interfering with research and experiment operations. Water in which impurities such as inorganic ions and organic substances remain are expressed in mg / L (ppm) or less, and is referred to as pure water. Water which is further purified is expressed in units of ppb, ppt and is referred to as ultra pure water.

### ■ High purity water purifier can meet wide range of laboratory needs

For example, Type1 / A4 level pure water can cover all applications from Type1 to Type4 (ASTM D 1193) / A1 to A4 (JIS K 0557) levels. Yamato Scientific's water purifier is designed to produce Type1 / A4 level of both distilled water and deionized water. Meanwhile, models which can produce higher-level ultra pure water such as TOC reduction water and pyrogen-reduced water are also available. Customers can choose based on their specific needs.

### ■ Auto Still® water purifier

Auto Still water purifiers are a combination of ion exchange through filters and distillation to produce the desired type of water quality. Deionized water is produced through various types of filters from raw water while distilled water is produced by heating up and cooling down process.

Series	Models
Super Auto Still ®	WG270
Auto Still ®	WG250B / WG1000 WG203 WA570 / WA730 WS200 / WS220

### ■ Pure Line® water purifier

Non-heating ultra pure water purifiers in combination with reverse osmosis membrane, ion exchange resin, activated carbon and filters.

Series	Models
Pure Line ®	WE200 WL200 / WL220 / WL220T WL100

### ■ Labo Cube® water purifier

Space-saving water purifier that can be installed under a fume hood or sink, or on a table; either as a benchtop unit or on movable casters for easy mobility.

Series	Models
Labo Cube ®	WL320A / WL320B



Labo Cube® WL320 installation example

## JIS K 0557 (Japanese Industrial Standards)

Item*1	A1	A2	A3	A4
Electrical conductivity μS/cm (25°C)	<5	<1*2*3	<1*2	<1*2
Total organic carbon (TOC) μgC/L	<1000	<500	<200	<50
Zinc μgZn/L	<0.5	<0.5	<0.1	<0.1
Total silica μgSi <sub>2</sub> /L	-	<50	<5.0	<2.5
Chloride ion μgCl <sup>-</sup> /L	<10	<2	<1	<1
Sulfate ion μgSO <sub>4</sub> <sup>2-</sup> /L	<10	<2	<1	<1

\*1. Select water type according to test method or individual water provision

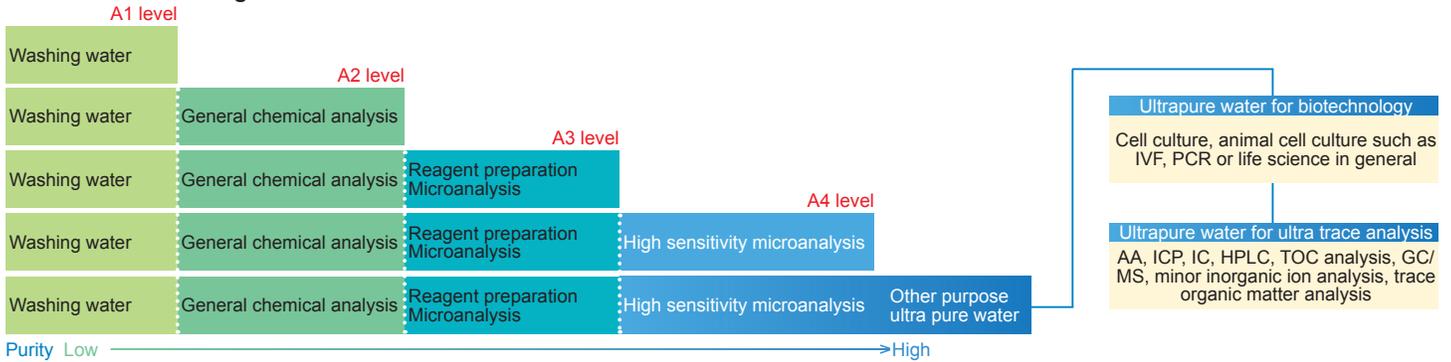
\*2. Measured by directly introducing water delivery port into electrical conductivity

\*3. When connected directly to final ion-exchange device and introducing water delivery port into electrical conductivity, electrical conductivity is 0.01mS/m (or 0.1μS/cm) (at 25°C)

## ASTM D1193 (American Society for Testing and Materials)

	Type I	Type II	Type III	Type IV
Electrical conductivity μS/cm at 25°C	<0.056	<1.0	<0.25	<5.0
Electrical resistivity MΩ•cm at 25°C	>18	>1.0	>4.0	>0.2
pH at 25°C	-	-	-	5.0 to 8.0
Total organic carbon (TOC) μg/L	<50	<50	<200	no limit
Sodium μg/L	<1	<5	<10	<50
Chlorides μg/L	<1	<5	<10	<50
Total silica μg/L	<3	<3	<500	no limit

## Purified Water Usage



## Water purifier portfolio and usage

Type	Series	Model	Water purifying method	Purified water		Level (ASTM D1193 JIS K 0557)		Usage (based on JIS K 0557)			
				Distilled water	Deionized water	Distilled water	Deionized water	A1	A2	A3	A4
Super high class	Super Auto Still®	WG270	Ion-exchange→Distillation →UV lamp→Filtration	○	○	T2 A4	T1 A4	■ ●	■ ●	■ ●	■ ●
High class	Auto Still®	WG250B/WG1000	Ion-exchange→Distillation →Filtration	○	○	T2 A4	T1 A4	■ ●	■ ●	■ ●	■ ●
Standard	Auto Still®	WG203	Ion-exchange→Distillation	○	○	T2 A4	T1 A4	■ ●	■ ●	■ ●	●
Large capacity Low running cost	Auto Still®	WA570/WA730	Distillation→Ion-exchange →Filtration	○	○	T4 A1	T1 A4	■ ●	●	●	●
Compact	Auto Still®	WS200/WS220	Distillation	○	-	T4 A1	-	■			
Standard	Pure Line®	WE200	RO membrane →Ion-exchange→Filtration	-	○	-	T1 A4	●	●	●	●
Economical	Pure Line®	WL200/WL220/ WL220T	Ion-exchange→Filtration	-	○	-	T2 A3	●	●	●	
Economical Simple	Pure Line®	WL100	Ion-exchange	-	○	-	-				
Long life	Labo Cube®	WL320A/WL320B	Ion-exchange→Filtration	-	○	-	T2 A4	●	●	●	●

■:Distilled water ●:Deionized water

### Attention

- Do not bend the drain hose
- Drain hose should be lower than the unit's drain port. It is recommended to attach water supply hose to tap water with sink.
- May pose high risk if feeding water hose is connected to tap water without sink as water leakage or hose damage may occur
- When sink is separate from the faucet, please use optional water supply port unit.
- Compared to standard water hose, water supply port unit is designed to prevent loosening from faucet when water pressure changes. Raw water pressure is kept the same with the use of the water supply port unit.
- Raw water pressure should be within specified pressure range.
- Avoid flammable or explosive gas atmosphere. Unit is not explosion-proof

## Water Purifier Overview

Model	Distilled water production (L/hr.) Water quality	Deionized water collection (L/min.) Water quality	Tank / Storage space (L)	Power supply	Series / Water Purification Process
 WG270	1.8 Type2 / A4	0.5~1.0 Type1 / A4	Polyethylene tank 20	AC115V AC220V	Super Auto Still® Raw water → Membrane filter → Ion exchange → Distillation → Membrane filter → Deionized water Raw water → Membrane filter → Ion exchange → Distillation → Membrane filter → Distilled water
 WG250B/1000	1.8 (WG250B) 5.0 (WG1000) Type2 / A4	0.5~1.0 Type1 / A4	Polyethylene tank 30 (WG250B) 100 (WG1000)	AC115V/AC220V (WG250B) AC220V (WG1000)	Auto Still® Raw water → Membrane filter → Ion exchange → Distillation → Membrane filter → Deionized water Raw water → Membrane filter → Ion exchange → Distillation → Membrane filter → Distilled water
 WG203	1.8 Type2 / A4	1.0 Type1 / A4	Polyethylene tank 20	AC115V AC220V	Auto Still® Raw water → Membrane filter → Ion exchange → Distillation → Deionized water Raw water → Membrane filter → Ion exchange → Distillation → Distilled water
 WA570/730	5 (WA570) 10 (WA730) Type 4 / A1	1.4~1.5 Type1 / A4	Polyethylene tank 60	AC220V	Auto Still® Raw water → Membrane filter → Distillation → Ion exchange → Membrane filter → Deionized water Raw water → Membrane filter → Distillation → Membrane filter → Distilled water
 WS200/220	1.8 Type 4 / A1	-	Polyethylene tank 20	AC115V AC220V	Auto Still® Raw water → Distillation → Distilled water
 WE200	-	0.5~1.0 Type1 / A4	-	AC100V~240V	Pure Line® Raw water → Membrane filter → RO → Ion exchange → Membrane filter → Deionized water
 WL200/220/220T	-	1.0 Type2 / A3	Polyethylene tank 3 (WL220T)	AC100V~240V	Pure Line® Raw water → Ion exchange → Membrane filter → Deionized water
 WL100	-	2.5	-	No AC power supply needed	Pure Line® Raw water → (Optional) Membrane filter → Ion exchange → (Optional) Membrane filter → Deionized water
 WL320A/320B	-	1.0 Type2 / A4	-	AC100V~240V	Labo Cube® Raw water → Membrane filter → Ion exchange → Membrane filter → Deionized water

## Features

Auto Still®	Water quality monitor	Water quality abnormal alarm	Empty boiling prevention device	Heater overheat detection	Leakage detection	Water outage detection	Water pump idling prevention	Purity water volume setting	Cartridge exchange reminder
WG270	●	●	●	●	●	●	●	●	●
WG250B/1000	●	●	●	●	●	●	●	●	●
WG203	●	●	●	●	●	●	●	●	●
WA570/730	●	●	●	●	●	●	●	●	●
WS200/220			●						

Pure Line® Labo Cube®	Water quality display	RO membrane self clean	Water temp. display	Validation correspondence	Cartridge exchange reminder
WE200	●	●	●	●	●
WL200/220/220T	●			●	●
WL100	●				
WL320A/320B	●			●	●