Lab1st Beta Series Water Purification System

An ideal choice for your critical and analytical applications

Labfirst Scientific Instruments (Shanghai) Co., Ltd.

Laboratory Water Purification System

Ultrapure Water

Pure Water

Reverse Osmosis Water

Lab1st offers a broad range of laboratory water purification systems featuring a versatile and compact design. They are built with cutting-edge technology and material such as American Dow RO film and Japanese cold cathode UV sterilizer. As is known to all, a piece of state-of-art and efficient lab equipment could largely boost your scientific breakthrough. Lab1st water purification systems can definitely meet all your essential needs.

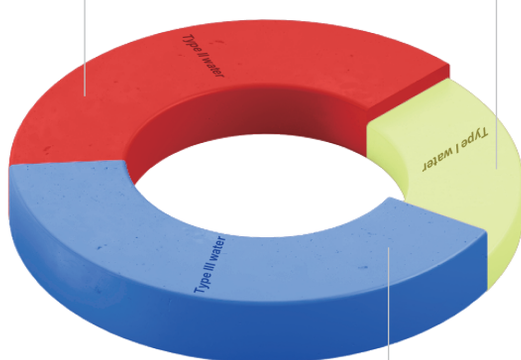
There are several types of water, and each type can be used in different applications. Based on the GB6682-2008 standard, we provide three types of water: pure water, ultrapure water and reverse osmosis water.

Type II water Pure water:

Used for inorganic trace analysis experiments like atomic absorption spectrochemical analysis

Type I water Ultrapure water:

Ideal for demanding and critical analytical applications, such as chromatography.



Type III water Reverse osmosis water :

This type of water is mainly used in general laboratory applications.

GB6682-2008 standard

Parameter	Type I water	Type II water	Type III Water
PH value at 25°C	–	5.0~7.5	5.0~7.5
Conductivity (mS/m) at 25°C	≤0.01	≤0.5	≤0.5
Oxidisable matter Oxygen content (mg/l)	–	≤0.4	≤0.4
Absorbance at 254 nm and 1 cm optical path length, absorbance units	≤0.001	–	–
Residue after evaporation on heating at 110oC (mg/kg)	–	≤2	≤2
Silica (SiO2) content (mg/l)	≤0.01	–	–

Lab1st Beta series laboratory water purification system is an integrated system which produces both pure water and ultrapure water using tap water. It is widely used in basic application, trace analysis, life science and molecular biology. The machine is compact and efficient enough to meet all your essential requirements. Apart from all the basic functions, Beta III series supports WIFi and can connect to a mobile phone. It can display the water quality, temperature, pressure, service time of consumables, flow rate and water volume.

Beta I
Beta I-TF

FEATURES

- Beta Ⅰ and Beta Ⅰ-TF deliver up to 40L/H ultrapure water and pure water;
- Equipped with online detection of output water quality;
- Compact, user-friendly and high-efficient;
- LCD display.

Model	Beta Ⅰ	Beta Ⅰ–TF
Technical Specifications		
Dimensions [mm]	500×580×400	500×580×400
[W×H×D] ["]	19.7×22.8×15.7	19.7×22.8×15.7
Empty weight [approx,] [Kg]	38	38
Power supply / power / Noise	220VAC 50Hz / 50–80w /＜50db	220VAC 50Hz / 50–80w /＜50db
Feed Water Quality		
Regulatory compliance	Comply with the requirements of GB 5749–2022 regulations	Comply with the requirements of GB 5749–2022 regulations
Input Pressure [bar]	2~5	2~5
Temperature [°C]	5~45	5~45
TOC	＜5000ppb	＜5000ppb
Max. total hardness [max.CaCO3]	450ppm	450ppm
Free chlorine	＜2ppm	＜2ppm
Iron [total Fe content]	＜0.3ppm	＜0.3ppm
Manganese	＜0.1ppm	＜0.1ppm
Aluminum	＜0.2ppm	＜0.2ppm
Turbidity	＜1 NTU	＜1 NTU
PH value	6.5–8.5	6.5–8.5

Model	Beta Ⅰ	Beta Ⅰ–TF
Output water Quality		
Type Ⅰ Ultrapure Water	●	●
Type Ⅱ Pure Water	●	●
Basic configuration		
LCD Display [b/w]	●	●
Online detection of output water quality	●	●
External pressure barrel	●	●
Conical sterile water tank	○	○
Remote water Intake gun	○	○
Extension module	○	○
System Process		
PF [Pretreatment components]	●	●
PP [Integrated PP cotton]	●	●
RO [Ro film Dow]	●	●
DI [Ion exchange]	●	●
UV [Cold cathode UV sterilizer]	●	●
TF [Terminal filter]	——	●
UDF [Integrated activated carbon]	●	●
Type Ⅰ Ultrapure Water		
Water yield [L/h]	10/20/30/40	10/20/30/40
Water Intake flow rate [Pressure barrel is needed]	1.5~2 L/min	1.5~2L/min
Conductivity [μS/cm@25°C]	0.055	0.055
Resistivity [MΩ·cm@25°C]	18.2	18.2
TOC content	＜10ppb	＜3ppb
Particle content [＞0.2μm/mL]	＜1	＜1
Endotoxins	——	＜0.002Eu/ml
Type Ⅱ Pure Water		
Water yield [L/h]	10/20/30/40	10/20/30/40
Water Intake flow rate [Pressure barrel is needed]	＞1.5~2 L/min	＞1.5~2 L/min
Heavy metal ions [ppb]	＜0.1	＜0.1
Conductivity [μS/cm@25°C]	0.1~0.2	0.1~0.2
Resistivity [MΩ·cm@25°C]	5~10	5~10
Particle content [＞0.2μm/mL]	＜1	＜1
Typical ion retention	96~99%	96~99%
Retention of organic substances	＞99%	＞99%

● = Standard ○ = Optional —— = N/A

Beta Ⅱ
Beta Ⅱ -TF
Beta Ⅱ -UF
Beta Ⅱ -TF/UF

FEATURES

- Water yield: 5/10/20/30/40 L/h;
- Output water quality: Type Ⅰ ultrapure water and Type Ⅱ pure water;
- LCD display; Voice broadcast; Timer; Data record export;
- Online detection of output water and feed water quality;
- External pressure barrel.

PRODUCT DETAILS

5.0 inch large screen; Display running status and parameters of the system in real time.

Built-in Japanese cold cathode UV sterilizer; With a long life span of 50,000h.

Unique dust-proof design of water outlet; Quick terminal filter.

Powerful pretreatment components to effectively protect RO components.

The UP column module is installed with RO film from America DOW company.

Conical sterile water tank; Prevent air contamination and guarantee water quality.(Optional)

Remote water intake gun is equipped with extensible water pipe so that users can take water easily.(Optional).

Extensible component integrates water tank and pretreatment components. (optional)

Model	Beta II	Beta II –TF	Beta II –UF	Beta II –TF/UF
Technical Specifications				
Dimensions [mm]	425 ×530 ×545	425 ×530 ×545	425 ×530 ×545	425 ×530 ×545
[W×H×D] ["]	16.7×20.9×21.5	16.7×20.9×21.5	16.7×20.9×21.5	16.7×20.9×21.5
Empty weight [approx,] [Kg]	25	25	25	25
Power supply / power / Noise	220VAC 50Hz / 50–80w /＜50db			
Feed Water Quality				
Regulatory compliance	Comply with the requirements of GB 5749–2022 regulations			
Input Pressure [bar]	2~5	2~5	2~5	2~5
Temperature [°C]	5~45	5~45	5~45	5~45
TOC	＜5000ppb	＜5000ppb	＜5000ppb	＜5000ppb
Max. total hardness [max.CaCO3]	450ppm	450ppm	450ppm	450ppm
Free chlorine	＜2ppm	＜2ppm	＜2ppm	＜2ppm
Iron [total Fe content]	＜0.3ppm	＜0.3ppm	＜0.3ppm	＜0.3ppm
Manganese	＜0.1ppm	＜0.1ppm	＜0.1ppm	＜0.1ppm
Aluminum	＜0.2ppm	＜0.2ppm	＜0.2ppm	＜0.2ppm
Turbidity	＜1 NTU	＜1 NTU	＜1 NTU	＜1 NTU
PH value	6.5–8.5	6.5–8.5	6.5–8.5	6.5–8.5

Model	Beta Ⅱ	Beta Ⅱ–TF	Beta Ⅱ–UF	Beta Ⅱ–TF/UF
Output water Quality				
Type Ⅰ Ultrapure Water	●	●	●	●
Type Ⅱ Pure Water	●	●	●	●
Basic configuration				
LCD Display [b/w]	●	●	●	●
Online detection of output water quality	●	●	●	●
Online detection of feed water quality	●	●	●	●
Voice broadcast	●	●	●	●
Timing function	●	●	●	●
Data record export	●	●	●	●
External pressure barrel	●	●	●	●
Conical sterile water tank	O	O	O	O
Remote water Intake gun	O	O	O	O
Extension module	O	O	O	O
System Process				
PF [Pretreatment components]	●	●	●	●
PP [Integrated PP cotton]	●	●	●	●
RO [Ro film Dow]	●	●	●	●
DI [Ion exchange]	●	●	●	●
UV [Cold cathode UV sterilizer]	●	●	●	●
TF [Terminal filter]	——	●	——	●
UF [Ultra filter]	——	——	●	●
UDF [Integrated activated carbon]	●	●	●	●
Type Ⅰ Ultrapure Water				
Water yield[L/h]	5/10/20/30/40	5/10/20/30/40	5/10/20/30/40	5/10/20/30/40
Water Intake flow rate [Pressure barrel is needed]	1.5~2L/min	1.5~2L/min	1.5~2L/min	1.5~2L/min
Conductivity [μS/cm@25°C]	0.055	0.055	0.055	0.055
Resistivity [MΩ·cm@25°C]	18.2	18.2	18.2	18.2
TOC content	＜10ppb	＜3ppb	＜5ppb	＜3ppb
Particle content [＞0.2μm/mL]	＜1	＜1	＜1	＜1
Endotoxins	——	＜0.002Eu/ml	＜0.001Eu/ml	＜0.001Eu/ml
RNase concentration	——	——	＜0.01ng/ml	＜0.01ng/ml
DNase concentration	——	——	＜4pg/ul	＜4pg/ul
Type Ⅱ Pure Water				
Water yield[L/h]	5/10/20/30/40	5/10/20/30/40	5/10/20/30/40	5/10/20/30/40
Water Intake flow rate [Pressure barrel is needed]	＞1.5~2 L/min	＞1.5~2 L/min	＞1.5~2 L/min	＞1.5~2 L/min
Heavy metal ions[ppb]	＜0.1	＜0.1	＜0.1	＜0.1
Conductivity [μS/cm@25°C]	0.1~0.2	0.1~0.2	0.1~0.2	0.1~0.2
Resistivity [MΩ·cm@25°C]	5~10	5~10	5~10	5~10
Particle content [＞0.2μm/mL]	＜1	＜1	＜1	＜1
Typical ion retention	96~99%	96~99%	96~99%	96~99%
Retention of organic substances	＞99%	＞99%	＞99%	＞99%

● = Standard O = Optional —— = N/A

Beta Ⅲ
Beta Ⅲ -TF
Beta Ⅲ -UF
Beta Ⅲ -TF/UF

FEATURES

- Water yield: 5/10/20/30/40 L/h;
- Output water quality: Type Ⅰ ultrapure water and Type Ⅱ pure water;
- Online detection of output water and feed water quality;
- Color touchscreen; Timer; Data record export;
- IR remote control; Foot switch;
- High-quality, time-saving and easy to use.

PRODUCT DETAILS

Clear and Convenient Display

Beta III series smart machine can clearly display real-time running status, water quality, temperature, pressure, service time of consumables, flow rate and water volume on the tablet computer so that users can get real-time data easily.

Security of User Data

Beta III series adopts protective measures for system alarm, water intake and historical record on user quantity so as to ensure normal and safe use of the system.

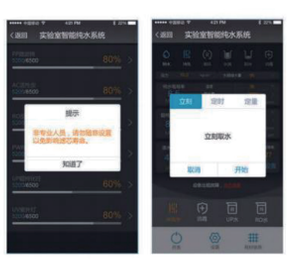
Diverse Controlling Method

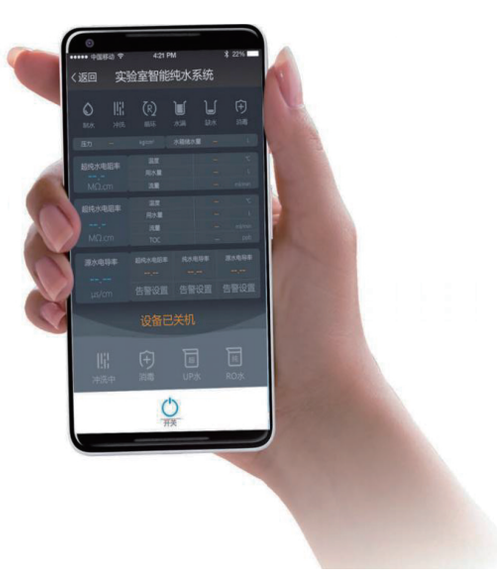
Users can control the machine by using smart touch screen, smart remote control, mobile phone or tablet computer.

Energy-efficient

Beta III series can enter standby status when the system is left unused long. Standby time and auto power-off time can be set at the backstage.When unused, the machine will shut down timely so as to save energy.

NEW TOUCH CONTROL SYSTEM





Beta III series supports WFi and can connect to a mobile phone. It can display the water quality, temperature, pressure, service time of consumables, flow rate and water volume. You don't need to worry about when to replace the filter element since a reminder will be sent to your mobile phone when necessary. You can also operate the machine remotely by using a phone.

PRODUCT DETAILS

7.0 inch color capacitive touch screen. Easy and convenient to operate

Euqipped with IR remote control, one-key ON/OFF, water intake, circulation and washing.

Remote water intake gun is equipped with extensible water pipe so that users can take water easily.(Optional).

The UP column module is installed with RO film from America DOW company.

Conical sterile water tank; Prevent air contamination and guarantee water quality.(Optional)

Independent TOC online detection module and micro-injection pump are used to control flow rate and analysis time and raise the accuracy.(optional)

Remote water intake arm adopts 1.8 inch color screen. Its height can be adjusted within 6 grades and it is horizontally rotatable. (optional)

Model	Beta II	Beta II –TF	Beta II –UF	Beta II –TF/UF
Technical Specifications				
Dimensions [mm]	425 ×530 ×545	425 ×530 ×545	425 ×530 ×545	425 ×530 ×545
[W×H×D] ["]	16.7×20.9×21.5	16.7×20.9×21.5	16.7×20.9×21.5	16.7×20.9×21.5
Empty weight [approx,] [Kg]	25	25	25	25
Power supply / power / Noise	220VAC 50Hz / 50–80w /＜50db			
Feed Water Quality				
Regulatory compliance	Comply with the requirements of GB 5749–2022 regulations			
Input Pressure [bar]	2~5	2~5	2~5	2~5
Temperature [°C]	5~45	5~45	5~45	5~45
TOC	＜5000ppb	＜5000ppb	＜5000ppb	＜5000ppb
Max. total hardness [max.CaCO3]	450ppm	450ppm	450ppm	450ppm
Free chlorine	＜2ppm	＜2ppm	＜2ppm	＜2ppm
Iron [total Fe content]	＜0.3ppm	＜0.3ppm	＜0.3ppm	＜0.3ppm
Manganese	＜0.1ppm	＜0.1ppm	＜0.1ppm	＜0.1ppm
Aluminum	＜0.2ppm	＜0.2ppm	＜0.2ppm	＜0.2ppm
Turbidity	＜1 NTU	＜1 NTU	＜1 NTU	＜1 NTU
PH value	6.5–8.5	6.5–8.5	6.5–8.5	6.5–8.5

Model	Beta III	Beta III-TF	Beta III-UF	Beta III-TF/UF
Output water Quality				
Type I Ultrapure Water	●	●	●	●
Type II Pure Water	●	●	●	●
Basic configuration				
Color Touchscreen	●	●	●	●
Online detection of output water quality	●	●	●	●
Online detection of feed water quality	●	●	●	●
Timing function	●	●	●	●
IR remote control	●	●	●	●
Data record export	●	●	●	●
External pressure barrel	●	●	●	●
Conical sterile water tank	O	O	O	O
Remote water Intake gun	O	O	O	O
Remote water Intake arm [Adopts 1.8" color screen]	O	O	O	O
Foot switch	●	●	●	●
Extension module	O	O	O	O
Independent TOC online detection	O	O	O	O
Lonpure EDI technology module	O	O	O	O
System Process				
PF [Pretreatment components]	●	●	●	●
PP [Integrated PP cotton]	●	●	●	●
RO [Ro film Dow]	●	●	●	●
DI [Ion exchange]	●	●	●	●
UV [Cold cathode UV sterilizer]	●	●	●	●
TF [Terminal filter]	——	●	——	●
UF [Ultra filter]	——	——	●	●
UDF [Integrated activated carbon]	●	●	●	●
Type I Ultrapure Water				
Water yield[L/h]	5/10/20/30/40	5/10/20/30/40	5/10/20/30/40	5/10/20/30/40
Water Intake flow rate [Pressure barrel is needed]	1.5~2L/min	1.5~2L/min	1.5~2L/min	1.5~2L/min
Conductivity [μS/cm@25°C]	0.055	0.055	0.055	0.055
Resistivity [MΩ·cm@25°C]	18.2	18.2	18.2	18.2
TOC content	＜10ppb	＜3ppb	＜5ppb	＜3ppb
Particle content [＞0.2μm/mL]	＜1	＜1	＜1	＜1
Endotoxins	——	＜0.002Eu/ml	＜0.001Eu/ml	＜0.001Eu/ml
RNase concentration	——	——	＜0.01ng/ml	＜0.01ng/ml
DNase concentration	——	——	＜4pg/ul	＜4pg/ul
Type II Pure Water				
Water yield[L/h]	5/10/20/30/40	5/10/20/30/40	5/10/20/30/40	5/10/20/30/40
Water Intake flow rate [Pressure barrel is needed]	＞1.5~2 L/min	＞1.5~2 L/min	＞1.5~2 L/min	＞1.5~2 L/min
Heavy metal ions[ppb]	＜0.1	＜0.1	＜0.1	＜0.1
Conductivity [μS/cm@25°C]	0.1~0.2	0.1~0.2	0.1~0.2	0.1~0.2
Resistivity [MΩ·cm@25°C]	5~10	5~10	5~10	5~10
Particle content [＞0.2μm/mL]	＜1	＜1	＜1	＜1
Typical ion retention	96~99%	96~99%	96~99%	96~99%
Retention of organic substances	＞99%	＞99%	＞99%	＞99%

● = Standard O = Optional —— = N/A