

ULTRAPURE WATER SYSTEMS: Labaqua series

DESCRIPTION



Labaqua ultrapure systems are multi-purpose water purification systems. The Labaqua systems produce ultrapure and pure water directly from tap water.

Labaqua Ultrapure systems are available in the following configurations:

- **Labaqua HPLC** produces water with very low organic carbon (TOC) content meeting requirements of liquid chromatography methods. **Labaqua HPLC** water can also be used for some microbiological and molecular biology applications
- **Labaqua Bio** system produces water with very low organic and RNase/DNase content that is intended for the use in molecular biology, including RNase-sensitive applications

Any configuration of a Labaqua ultrapure system produces both ultrapure and pure water. Ultrapure (Grade 1) water is dispensed through the point-of-use filter on the front panel. Pure (Grade 2) water is dispensed directly from the storage tank.



Labaqua ultrapure water can be used for the most demanding applications including, but not limited to: Inorganic trace analysis, Liquid chromatography, Cell culture, Molecular biology.

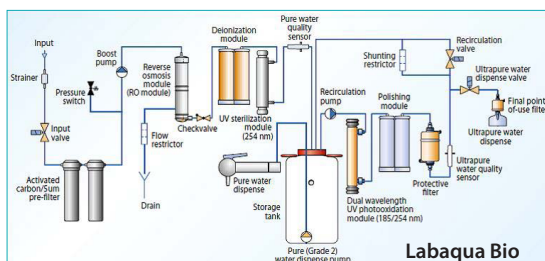
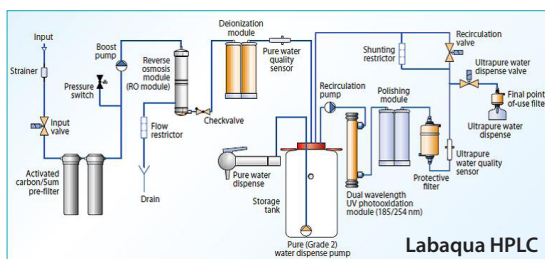
With resistivity of 18.2 Mega — Ohm × cm (0.055 μS/cm) ultrapure water produced by a Labaqua system exceeds requirements of all relevant standards (ISO 3696 Grade 1, ASTM Type I, CLSI Type I). Purified water is collected in a storage tank. An integrated recirculation system ensures consistent quality of water and reduces total organic carbon (TOC) to very low levels: <2ppb.

Pure water produced by the Labaqua systems complies with the requirements of ISO 3696 Grade 2 water and can be used for labware washing, wet chemistry methods, flame spectrophotometers, etc. The dispense rate of ultrapure water is

2 L/min. Whereas the dispense rate of pure water is 4 L/min.

All Labaqua systems have a controller with a graphic LCD display for water quality indication. The LCD display provides all necessary information about system status, as well as the remaining pre-filter life and deionization (DI) module performance. The smart DI module monitoring system also provides a reduction in running costs. A user is instructed to replace the DI module only when the module is near the end of its service life.

All cartridges and filters are easily accessible and no tools are required to replace them. The Labaqua system can be installed on a laboratory bench or mounted on a wall.



Application	Labaqua HPLC	Labaqua Bio
Reagent preparation	yes	yes
Ion chromatography	yes	yes
ICP-MS	yes	yes
Atomic absorption spectrophotometry with graphite atomizer	yes	yes
ICP-OES	yes	yes
HPLC	yes	yes
Gas chromatography	yes	yes
Total Organic Carbon measurement	yes	yes
Flow cytometry	N/A	yes
Cell and tissue culture	N/A	yes
Molecular biology	N/A	yes

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The Labaqua has important safety functions:

- Tank filling control
- Tap water pressure control
- Protection from tank sensor failure

The Labaqua systems include:

- Boost pump
- Pre-filter set
- Reverse osmosis module
- Deionization module
- Final stage polishing module
- 25 L storage tank with an integrated Grade 2 dispensing pump
- Recirculation system

Model specific modules:

- **Labaqua HPLC** – Point-of-use microfilter
- **Labaqua HPLC with TOC monitor** – Point-of-use microfilter, Integrated TOC monitor
- **Labaqua BIO** – Point-of-use ultrafilter, UV sterilization module



ORDERING INFORMATION:

Cat. number

Labaqua Bio	BS-070101-A02
Labaqua HPLC	BS-070102-A02
Labaqua HPLC with TOC monitor*	BS-070103-A02

* — build in total organic carbon monitor

SPECIFICATIONS

Purified water specifications	Labaqua HPLC	Labaqua Bio
Pure (Grade 2) water resistivity	> 10 MΩ × cm	
Pure (Grade 2) water conductivity	< 0.1 µS/cm	
Ultrapure (Grade 1) water resistivity	18.2 MΩ × cm	
Ultrapure (Grade 1) water conductivity	0.055 µS/cm	
TOC	< 2 ppb	
RNase	N/A	< 0.01 ng/mL
DNase	N/A	< 4 ng/mL
Bacteria	< 1 cfu/mL	
Endotoxins	< 0.15 EU/mL	< 0.001 EU/mL
Particles > 0.22 µm	< 1 per mL	
Nominal flow, pure water (to storage tank)	10 L/h	
Nominal dispense flow, ultrapure water	2 L/min	
Nominal dispense flow, pure water	4 L/min	
Deionization module life (standard module)	1 m ³	
Recovery	> 30 %	
Dimensions (W×D×H), cm	50 × 40 × 60	
Storage tank	25 L	
Tank dimensions (W×D×H), cm	30 × 25 × 50	
Feed water pressure	0.5 – 5 bar	
Feed water conductivity	< 900 µS/cm	
Nominal operating voltage	230 V, 50/60 Hz	
Power consumption	130 W	

Optional accessories	Cat. number
0.22 µm air vent filter for the storage tank	BS-070102-AK
RO membrane for higher capacity (20 L/h)	BS-070102-BK
Electrodeionization module 10 - 30 L/h	BS-070102-CK
Water storage tank "Comfort" w/ level switch, dispense pump, 60 L	BS-070102-EK
50 L water storage tank "Economy" w/ level switch, pump	BS-070102-DK
Storage tank "Comfort" w/dispense pump, 100L	BS-070102-FK
Storage tank "Comfort" w/dispense pump, 200L	BS-070102-GK
Storage tank "Comfort" w/dispense pump, 300L	BS-070102-HK
IQ/OQ documentation	BS-070102-IK
Tap water filters (for clean tap water with hardness < 130ppm CaCO ₃):	
Pre-filter housing 10" w/ fittings (for clean tap water)	BS-070102-JK
Sediment filter 1 µm (for clean tap water)	BS-070102-KK
Tap water filters (for muddy and/or hard tap water with hardness > 130 ppm CaCO ₃):	
Pre-filter set 3 × 10" w/cartridges (polyphosphate, 5 µm + 1 µm) for muddy/hard tap water	BS-070102-LK

