

**Leaders in the
field of
Microbial
Biotechnology**



Find Us

Plot No. 468, JLPL Industrial Area,
Sector 82 Mohali - 140306,
Punjab, India
info@bioageindia.com
+91 987 200 4528
www.bioageindia.com
www.bioageindia.org

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Office Hours
Mondays to Saturday
9 AM - 6 PM



BIO·AGE

Equipment & Services

Water Purification Systems
Brochure



+91 987 200 4528

New, highly advanced yet economical series of Water Purification Systems



Our technology combines Reverse Osmosis with multi stage filtration modules for producing Analytical/ Reagent Grade Ultrapure Water Purification Systems which meets ASTM/CAP/NCCLS specifications.

Analytica™ Series Water Purification System



Type II Grade Water

Highlights:

- Three Stage pre-filtration setup of 10µ/5µ/1µ/0.5µ/iron filter, activated carbon to protect and enhance the life of the precious cartridges.
- Low initial investment while buying the water purification system.
- High flux thin film composite (TFC) polyamide RO membranes.
- EDI's continuous self regeneration process improves water quality.

Product Specifications:

Models	Analytica- 2/3/4/6/10/15/20/25/30/35/40/50	Analytica EDI- 2/3/4/6/10/15/20/25/30/35/40/50
Display	5.7" TFT /LED/LCDGraphic Display	5.7" TFT /LED/LCDGraphic Display



Product Flow Rate	2/3/4/6/10/15/20/25/30/35/40/50L/Hr	2/3/4/6/10/15/20/25/30/35/40/50L/Hr
Product Water Resistivity (at 25°C)	10-15 Mohm.cm	10-15 Mohm.cm
Conductivity	0.1-0.06 µS/cm	0.1-0.06 µS/cm
Cell Constant (K)	0.01/0.1/1.0	0.01/0.1/1.0
Ionic & Organic Rejection/Removal	>99%	>99%
Silicate Rejection	>99.9%	>99.9%
Bacterial Count (cfu/10ml<1)	<0.1cfu/ml	<0.1cfu/ml
On line UV Absorbance	254nm	254nm
TOC	<20ppb*	<20ppb*
Temperature Compensation	0-100°C	0-100°C
Deionization	Mixed Bed Resins Based	Continuous self Regeneration Electrodeionization Based

*only if online UV incorporated in the system and feed water TOC <250ppb

Applications:

Suitable for General Lab applications including Buffer,Media and dilution Preparation, Electrophoresis, Feed for Autoclaves,Steam generators, Stability chambers, Humidifiers, Weather test equipments Washing/ Rinsing of glass wares and Feed Water for Ultra Pure Water Purification Unit etc.



Technical Specifications:

Product Quality: Type-II water in a single integrated table top/wall mounted sleek lab water system. TDS is Zero.

Product Recovery: >55%(Double pass RO T.F.C.polyamide membranes)

Feed Water Requirement for Analytica Models :-

Feed Water Pressure:-0.5Kg-1.5Kg (7.11psi to 21.3psi)

Conductivity up to 3000 μ S/cm, TOC up to 2000ppb,pH: 4-10

Feed Water TDS: <2000, Temperature:<55°C,,Chlorine:< 3ppm

Feed CO₂ :-<50ppm, Fouling Index (SDI): upto 12

Any increase of above in feed water quality directly affects the final product quality of Analytica water.

Auto Flushing:-Every time system is switched on it goes for flushing mode to drain out all the contamination grown inside the stagnant water in cartridges/membranes.

Flushing Time: Customized and can be repeated or cancelled by pressing escape mode button.

Cleaning of R.O. Membrane: Automatic by flushing mode.

Safety Functions: Low pressure/high Pressure protection to R.O. module by switching off the supply to RO. pump.

Cartridge R.O. Exchange Alarm system gives audio/visual alarm to replace the cartridges with leftover time Display.

R.O. Exchange Alarm:-Audio/visual alarm for low rejecting R.O. cartridge with system switch off.

Tank:-Fitted with Multiple/ Three level switches & vent filter to synchronize with system to operate it automatically. System switches on/off according to the level of water in the tank.

R.O. Pump:- System incorporates low noise, high pressure R.O. Pump with temperature feed back.

ACP(020):Removes the volatility of organic matter.

Stand by Mode: Recirculation loop at stand by position (each one hour repeatedly) to maintain the water quality and cartridges life in good condition for Models as: Analytica, Ultra Plus, Direct Ultra, Dura-Q Series.

Note:*Systems are also available without storage tank and UV in it.

* Water storage tanks above 50 Liters available on demand basis.

*Pressure Tanks of 12/16/50 Ltrs Available on demand

*1-2 ppb with dual UV and Proteases:< 0.10 μ g/mL

Turbidity in NTU of Ultra Pure water <0.02

pH: 7/Neutral with online measurement.

Bacteria: Under aseptic condition<1cfu/100ml ie 0.001 cfu/ml

Standard Accessories(Unless & otherwise not specified)

(i) Prefill-III one set of Cartridge and Pressure Gauge R.O. module with low noise booster pump on requirement basis.

(ii) Analytica initial cartridge set.

(iii) Storage tank 20-50* Liters Polycarbonate/ Fox

PP/HDPE with 0.22 μ vent filter & high/low level sensors with alarm display in TFT.

(iv) Power cord.

(v) Instructions Manual

Other specifications for all Analytica Models :

Display: Online TFT Touch Screen/Graphic display for conductivity temperature with time.

Controller: Microprocessor based micro controller.

Conductivity Cell: Coaxial cell, Cell constant K=0.01/0.1/1.0

M.O.C.:SS316L,0.1°C accuracy thermistor to measure resistivity.

R.O.membrane with >200 Dalton cutoff, ions rejection >99% .

Communication Port: RS 232Serial/ USB Port as per GLP compliant.

Inbuilt Data storage for one year and can be transferred to PC .

Feed water (Before RO), RO product conductivity and %age

Rejection Display

Volumetric Dispensing:0.01 to 65L/Hr (variable with timer based)

Power supply:-230V+10%,50Hz,AC, Power Consumption:60W/Hour

Wright: (Approx.):25Kgs

Dimensions: 550mm(H),420mm(W),550mm(D)

Optional Accessories:-

(i) End point filter 0.22 μ with filling bell

(ii) Dual wavelength on line with UV 254nm & 185nm

(iii) Composite Vent filter (0.22 μ) with CO₂, absorbent

(iv) Storage tank with inbuilt UV inside it

(v) Online Pressure Display for R.O. Membrane

(vi) Feed Pump to enhance the inline pressure before prefiltration.

(vii) RO Water Unit and softener if feed water TDS>300

viii) Consumables will be labelled with RFID tag, inbuilt software

EDIK{Electro-deionization, ZAP-US make} is the most advance water treatment technology in current international standards, using RO and EDI integrated technology, it operates steadily, produces high quality water, is designed into modularization, need no-acid base reclaim, can reduce floor area and consumption, also reduce the cost of operation and maintenance. Electrodeionization(EDI) is a process by which an electric fields used to remove ions and polar species from an aqueous stream. By eliminating resin regenerating chemicals, EDI delivers significant economic and environmental benefits. EDI's continuous self regeneration process improves water quality by reducing water quality spikes and upsets. It turns from traditional water treatment technology to "Green Environmental Protection, Technology Innovation."

Ultra Plus™ Series

Water Purification System



Type I Grade Water

Highlights:

- Integrated table top/wall mounted sleek lab water system.
- Produces Type-I water and TDS is Zero.
- Lowest initial investment towards the cost of the system.
- Three stage pre-filtration of 10µ/5µ/1µ/0.5µ, Flowrate:50LPH Feed Water: RO/DI water.

Product Specifications:

Model	Ultra Plus UV Model	Ultra Plus UF Model
Display	5.7" TFT /LED/LCDGraphic Display	5.7"TFT /LED/LCDGraphic Display
Resistivity	18.2 Mohm.cm at 25°C	18.2 Mohm.cm at 25°C
Conductivity	0.05 µS/cm	0.05 µS/cm
Online UV absorbance	254nm	254nm
UF Membrane (NMWL/MWCO/Dalton)	-----	5000
Particulates (>0.1µm & <0.22 µm)	<1/ml	<1/ml

TOC (ppb)	<10ppb*	<5ppb*
Bacteria (1cfu/100ml)	<0.01cfu/ml	<0.01cfu/ml
Endotoxins/ Pyrogens (EU/ml)	-----	<0.001
End Point Filter	0.22 micron (EFA- 260 cm2)	0.22 micron (EFA- 260 cm2)
FlowRate/Auto volume dispense rate	0.01 to >= 2L/min	0.01 to >= 2L/ min
Dnase	-----	<0.005pg/µL
Rnase	-----	<0.001ng/ml
Analytical Instruments	Yes	Yes
AAS/ICP/MS/IC	Yes	Yes
HPLC/GC/TOC	Yes	Yes
Organic Analysis	Yes	Yes
Cell & Tissue Culture	No	Yes
In Vitro Fertilization	No	Yes
Electrophoresis/ PCR	No	Yes
DNA Sequencing	No	Yes
Molecular Biology	No	Yes

ELEMENTAL ANALYSIS(ppb): Fe,Cu,Al,Ni,Zn,Cr,Na,K,Cl,NO2,NO3,SO4:<0.005
 *Only if online UV incorporated in the system and feed water TOC<250ppb. TOC:<1-2 ppb with dual UV and UF Absorbance at 254 nm/cm optical path (A.U.): <0.001 and Dry residue after evaporating on heating at 110°C:NA
 Ionic and Organic Rejection/Removal: >99% Turbidity in NTU of Ultra Pure water <0.02 pH: 7/Neutral with online measurement. Proteases:< 0.10µg/mL
 Bacteria: Under aseptic condition<1cfu/1000ml ie 0.001cfu/ml

Applications:

Suitable for UPLC/HPLC/GC, Molecular Biology works, all Reagent General Analysis, IC,AAS,ICP-MS, Mammalian cell culture, recombinant DNA studies, Electrophoresis gel make-up and monoclonal anti body production, Ultra trace inorganic and organics analysis, TOC Analysis, PCR, 2-D Electrophoresis, critical cell culture and, Sequencing etc.

Technical Specifications:

Product Quality:-Type-I Reagent Grade Water

Feed Water Requirement:(Tap/RO/DI/DM/Analytical):-

Flow Rate:5L/10L/15L/20L/30L/50L/Hr

Capacity TDS: <300, Tank: 5L/6L/ 20L/50L/100L

Temp.:<55°C,,TOC up to 200ppb

Conductivity Cell:- Coaxial,Cell constant K=0.01,

MOC:SS316L,0.1°C accuracy thermistor to measure resistivity.

Other specifications for Ultra Plus UV/UF Models:

Display: LED/LCD/TFT 5.7" Touch screen display for conductivity, temperature with time.

Controller: Microprocessor based controller with key pads.

Special Trace Elements removal cartridge

Power Supply:-230V+ 10%,50Hz,AC.

Power Consumption:60Watt/Hour. Weight(Approx.):25Kgs.

Dimensions: 550 mm(H),420mm(W),505mm(D)

Standard Accessories:-

(i) One set of Triple bowl type Ultra Plus Cartridges(UPC-005).

(ii) One ACP-020-Removes the volatility of organic matter.

(iii) One UV 254nm

(iv) One EPF 0.20 μ with filling bell 260cm² PES/ PVDF.

(v) Power Cord and Instruction Manual.

(vi) Inbuilt data entry storage in controller as per GLP compliant.

(vii) Data transfer to PC with RS232C/USB port.

(viii)Volumetric Dispensing 0.01 to 2L/min(variable with timer based)

Optional Accessories :-

(i) Dual Wavelength UV with 254nm & 185nm.

(ii) EPF 0.20 μ with filling bell having 500/1000cm² EFA

(iii) Self regenerating EDI module(Electrodeionization,ZAP-US make)

(iv) Dispensing arm and storage tank 6L/20L/50L capacity with vent filter

(v) Online pH monitoring

(vi) Online TOC Monitor: Range 0 to 999 ppb having 1ppb increment,

(vii) Online pH Monitor: Range 2 to 12 to online measure the pH of Ultra Pure water with temperature compensation.

Self Diagnosis and features of Bio-Age Water Purification Systems for all Models:

(Analytica, Ultra Plus, Direct Ultra, and Dura-Q Series)

- Password Protection for the systems. Microprocessor controlled LED/LCD/TFT Graphic display/TFT Touch screen for water dispense.
- R.O. Membrane change alarm with percentage rejection basis and TDS of purified water of all above models is zero.
- Ionic Rejection>99%,Particulate/Silicate rejection>99%,high recovery of RO water up to 60%.

- Low feed water pressure alarm with system switches off to standby and restart after normal feed pressure
- Auto alarm for the UPC/EDI (ZAP US-Make module),Cartridge change, recovery loop with capillary tube and valve after EDI module>80%
- Auto High feed water conductivity alarm and auto shutdown if water quality falls. Inbuilt leak detector in the system for an internal leakage.
- Systems will supplied with calibration certificates, conformity from recognized international agencies & meet internationally recognized safety norms
- Auto alarm for full & empty tank, switches off the system to standby mode with auto restart at low level in water tank.
- Cylindrical PE/HDPE/PP storage tank with conical bottom 6l/10L/20L/50L/100L with multi level sensors, UV Lamp (254nm), dispense pump.
- Consumables will be labelled with RFID tag for better traceability, inbuilt software.
- Auto UV Cartridge change alarm with online hour meter in TFT Graphic display/Touch Screen.
- Auto recirculation loop at stand by mode to the feed water tank when system is at non dispensing mode .
- Auto flush/rinse/sanitization before final dispense of product water. Both fixed & variable volume dispensing(timer based) of product water.
- Auto alarm for EPF/ UF change on Life timer. RS232/USB Interface port, data management and inbuilt software for GLP compliance.
- Optional: Validation documents: IQ, OQ, PQ,MP/DQ and EDI module, remote access, flexible remote arm PVDF dispenser of 1m radius.

Direct Ultra™ & Dura Q Series™

Water Purification System



Highlights:

Direct Ultra:

- High recovery upto 60% of water with Polyamide T.F.C. membrane double RO Pass *Type-I & Type III water in a single integrated table top/wall mounted sleek system.
- Three Stage pre-filtration of 10µ/5µ/1µ/0.5µ, Iron filter, activated carbon, antiscalant. enough to protect and enhance the life of the precious cartridges
- Most economical ultra pure grade water cost per liter as compared to other systems available in the market.
- High quality T.F.C.Polyamide RO membrane >200 Dalton cutoff, Ion Rejection: >99%

Dura-Q Classic/ Dura-Q Premium:

- Type-I, Type II, Type-III water in a single integrated table top/wall mounted sleek unit or Ultra Pure(Type-I) & Analytical Grade Water(Type-II) in a single integrated system.
- Three stage Integrated pretreatment module of 10µ/5µ/1µ/0.5µ/iron filter, activated carbon, antiscalant, enough to protect and enhance the life of the precious cartridges.
- High recovery upto 60% of water with polyamide T.F.C.membrane double RO Pass
- Ionic and Organic Rejection/Removal: >99%

Product Specifications:

Parameters	Model: Direct Ultra TUVF- 5/10/15/20/25/30/35/40/50	Model:Dura-Q Classic- 5/10/15/20/25/30/35/40/50	Model:Dura-Q Premium- 5/10/15/20/25/30/35/40/50
Display	5.7" TFT /LED/LCD Display	5.7" TFT /LED/LCD Display	5.7" TFT /LED/LCD Display
Product Water	Type-I/ Type-III	Type-I/ Type-II	Type-I/Type-II/Type-III
Type-I Grade Water Specifications:-			
Resistivity	18.2 MOhm.cm at 25°C	18.2 MOhm.cm at 25°C	18.2 MOhm.cm at 25°C
Conductivity	0.05µS/cm	0.05µS/cm	0.05µS/cm
TOC	<5ppb*	<5ppb*	<5ppb*
Particulates(>0.1µm & <0.22 µm)	<1/ml	<1/ml	<1/ml
Bacteria (1cfu/100ml)	<0.01cfu/ml	<0.01cfu/ml	<0.01cfu/ml
Endotoxins/Pyrogens (EU/ml)	<0.001	<0.001	<0.001
RNase (ng/ml)	<0.001	<0.001	<0.001
DNase (pg/µl)	<0.005	<0.005	<0.005
Dispense Rate(Programmable)	> 2 L/min	> 2 L/min	> 2L/min
UF Membrane(NMWL/MWCO)* :	5000	5000	5000
End Point Filter: 0.2,0.1 (EFA: 250cm/260cm)2µ20.2,	0.1 (EFA: 250cm/260cm)2µ20	.2,0.1 (EFA: 250cm/260cm)2µ2	

Type-II Grade Water Specifications:-			
Resistivity	-----	10-15MΩm.cm at 25°C	10-15 MΩm.cm at 25°C
Conductivity	-----	0.1-0.06μS/cm	0.1- 0.06μS/cm
Dispense Rate(Programmable)	-----	upto 2 L/min	upto 2L/min
TOC	-----	<20ppb***	<20ppb***
Particulates (>0.1μm &<0.2 μm)	-----	<1/ml	<1/ml
Bacteria (cfu/10ml) <1	-----	<0.1cfu/ml	<0.1cfu/ml
Deionization	Mixed Bed Resins/EDI	Mixed Bed Resins/EDI****	Mixed Bed Resins/EDI****
Type-III Grade Water Specifications:-			
Conductivity	<20μS/cm***	-----	<20μS/cm***
Product Flow Rate (L/hr)	5/10/15/20/25/30	-----	5/10/15/20/25/30
Tank	Yes	Integrated/ Inbuilt	Integrated/ Inbuilt
Feed/RO/%Rejection Monitoring Yes		Yes	Yes
Cell Constant	K= 0.01/0.1/1.0	K= 0.01/0.1/1.0	K= 0.01/0.1/1.0

ELEMENTAL ANALYSIS(ppb): Fe,Cu,Al,Ni,Zn,Cr,Na,K,Cl,NO2,NO3,SO4:<0.005ppb, SiO2<0.001ppb. Absorbance at 254 nm/cm optical path (A.U.): <0.001 and Dry residue after evaporating on heating at 110°C:NA
 TOC:<1-2ppb with Dual UV,**<1ppb with dual UV and UF
 **Proteases:< 0.10μg/mL
 ***Depends upon feed water conductivity
 ****Electro-Deionization with self regeneration.
 Turbidity in NTU of Ultra Pure water <0.02 pH:7/Neutral with online measurement (7.0±0.2)
 Bacteria: Under aseptic condition<1cfu/1000ml ie 0.001cfu/ml

Applications:

Direct Ultra:

All Reagent Grade Water applications like Media/Buffer preparations, Molecular Biology, Analytical instruments like UPLC/HPLC/GC/TOC/ICP/MS/IC/AAS, Organic Analysis, Cell & Tissue Culture, In Vitro fertilization, Electrophoresis, PCR,DNA/Sequencing, Rnase, Dnase Applications, biochemicals etc.

DURA-Q Classic and DURA-Q Premium:

All Reagent Grade Water applications like Media/Buffer preparations, Molecular Biology, biotechnology, Microbiology, Analytical Instruments like UPLC/HPLC/GC/, Molecular Biology, biotechnology, Microbiology, Analytical Instruments TOC/ICP/MS/IC/AAS, Organic Analysis, Cell &Tissue Culture, In Vitro fertilization, Electrophoresis, PCR, DNA, Sequencing, RNase/ DNase Applications, biochemicals Feed water for Lab equipment like autoclave, stability chamber, humidifiers etc.

Technical Specifications:

Feed Water:

Potable Tap water/RO Water/DM/DI Water. Feed Water Pressure:-0.5Kg -1.5Kg(1-6bar),pH: 4 to 10 units Conductivity upto 3000 $\mu\text{S}/\text{cm}$, TOC: upto 2000ppb Temp.:<50°C, TDS: <2000, CO₂:<50ppm, Si<30ppm, Chlorine:<5ppm, HCO₃:7.5ppm Fouling Index: upto 50, Conductivity Cell:-Coaxial, Cell Constant K=0.01/0.1/1.0. MOC:SS316L,0.1°C thermister for measurement of resistivity.

Other specifications for Direct Ultra/ Dura-Q Series:

Display: 5.7" TFT Graphic/Touch screen for conductivity, temperature with time, recirculation/recovery loop, TDS:Zero
Controller: Microprocessor based graphic TFT display Power Supply:- 230V+ 10%,50Hz,AC. Power Consumption:60Watt/Hour, Wt.(Appx.):25Kgs.Dimensions: 550 mm(H),420mm(W),505mm(D)
Self-regenerating electro deionization(EDI),ZAP-US make.

Standard Accessories(Direct Ultra /Dura-Q Series)

- 1) One set of initial Cartridges
- 2) One ACP-020-Removes the volatility of organic matter.
- 3) One UV 254nm,One set Triple/Penta bowl Type UPC-005
- 4)One EPF 0.22 μ with filling bell 260 cm² area PES/PVDF .
- 5) Power cords and Instructions manual for both systems
- 6) Prefill III stage with cartridge and Pressure Gauge.
- 7) R.O. with >200 Dalton cutoff, Ions Rejection >99%
- 8) RS232-C/USB port,1year data storage as per GLP compliant
- 9) Volumetric Dispensing 0.01 to 2L/min(variable with timer based)
- 10) Storage tank 6/10/20 L with inbuilt vent Filter.

Optional Items/Accessories :-

- 1)Dual Wavelength UV with 185nm/254nm
- 2)Online TOC monitoring of final product(0 to 999 ppb)
- 3)Online pH Monitoring, data management, remote access.
- 4)Consumables will be labelled with RFID tag, inbuilt software .
- 5)Composite vent filter (0.2, 0.1 μm) with CO₂ Trap/absorbent in tank
- 6)Storage tank 20L/50L/100L 8) RO Water Unit and softener if feed water TDS>300 with multi level sensors & alarm in TFT .
- 7) Flexible remote arm PVDF dispenser of one meter radius
- 8) RO Water Unit and softener if feed water TDS>300
- 9) Footswitch for water delivery to reduce the external contamination
- 10)Stand for wall mounting of the system.
- 11) Validation documents(IQ, OQ, PQ, MP/DQ).
- 12) 3 Points delivery for ICP- MS grade water.
- 13) Special trace elements removal cartridge.

Self Diagnosis and features of Bio-Age Water Purification Systems for all Models: (Analytica, Ultra Plus, Direct Ultra, and Dura-Q Series)

- Password Protection for the systems. Microprocessor controlled LED/LCD/TFT Graphic display/TFT Touch screen for water dispense.
- R.O. Membrane change alarm with percentage rejection basis and TDS of purified water of all above models is zero.
- Ionic Rejection>99%,Particulate/Silicate rejection>99%,high recovery of RO water up to 60%.
- Low feed water pressure alarm with system switches off to standby and restart after normal feed pressure
- Auto alarm for the UPC/EDI (ZAP US-Make module),Cartridge change, recovery loop with capillary tube and valve after EDI module>80%
- Auto High feed water conductivity alarm and auto shutdown if water quality falls. Inbuilt leak detector in the system for an internal leakage.
- Systems will be supplied with calibration certificates, conformity from recognized international agencies & meet internationally recognized safety norms
- Auto alarm for full & empty tank, switches off the system to standby mode with auto restart at low level in water tank.
- Cylindrical PE/HDPE/PP storage tank with conical bottom 6l/10L/20L/50L/100L with multi level sensors, UV Lamp (254nm), dispense pump.
- Consumables will be labelled with RFID tag for better traceability, inbuilt software.
- Auto UV Cartridge change alarm with online hour meter in TFT Graphic display/Touch Screen.
- Auto recirculation loop at stand by mode to the feed water tank when system is at non dispensing mode .
- Auto flush/rinse/sanitization before final dispense of product water. Both fixed & variable volume dispensing(timer based) of product water.
- Auto alarm for EPF/ UF change on Life timer. RS232/USB Interface port, data management and inbuilt software for GLP compliance.
- Optional: Validation documents: IQ, OQ, PQ,MP/DQ and EDI module, remote access, flexible remote arm PVDF dispenser of 1m radius.

Lab Pure & Lab Q Series

Water Purification System



Highlights:

- Single stage pre-filtration setup of 10µ/5µ/1µ to protect and enhance the life of the RO cartridges
- Better substitute to Quartz/ Glass Single/ Double** Distillation Apparatus, TDS is zero.
- Easy quick fit connectors to exchange filter/module
- Very Low Electricity consumption as compared to conventional distillation apparatus, low maintenance.
- Saves potable water from tap up to 100L/hr VS distillation units
- High recovery rate >30% of double RO Pass
- No Scaling problem as compared to Distillation Saves Water as compared to conventional distillation method. Rapid and simple disinfection

Product Specifications:

Parameters	Model: Lab Pure	Model: LabQ-I	LabQ-II
Display	16x2 Character LCD	16 x4 Character LCD	16x4 Character LCD
Resistivity	0.1-1.0 Mohm.cm at 25°C	1-5 Mohm.cm at 25°C	>10 Mohm.cm at 25°C
Conductivity	10-1µS/cm	1-0.2µS/cm	< 0.1µS/cm
Ionic Rejection	> 98%	> 98%	> 98%
Inorganics&Particulates Rejection	> 99%	> 99%	> 99%

TOC (ppb)	<50ppb*	<30ppb*	<30ppb*
Bacteria/Microbial Particles	<100cfu/ml	<100cfu/ml	<50cfu/ml
Flow Rate/Auto dispense Rate	5/10/15/20 Ltr/Hr	5/10/15/20 Ltr/Hr	5/10/15/20 Ltr/Hr
Product Water Grade	Type III	Type III/Type II**	Type II**
Product Water Monitoring	Yes	Yes	Yes
% RO Rejection	Yes	Yes	Yes
Auto Flushing with Customized Times	Yes	Yes	Yes
Feed Water Monitoring	Yes	Yes	Yes
Cell Constant (K)	1.0/0.1	0.1/0.01	0.1/0.01
Temperature Compensation	0 to 100°C	0 to 100°C	0 to 100°C
Low/ High Feed Water Protection	Yes	Yes	Yes
Tank	Optional	Yes	Yes
Prefiltration	Single Stage (Micron)	Double Stage (Micron)	Three Stage
Datalogging	-----	Yes	Yes

* Feed Water TOC <250ppb

** Depends upon feed water conductivity <300µS/cm

Applications:

Used as a better substitute to single/double distillation water in applications like Media/ Buffer preparations, Normal, Auto Analyzer, Clinical Analyzer, Chemistry Analyzer etc.

Technical Specifications:

Product Quality:Type-III/II Clinical Grade Water in a single integrated water system from EPF/POU or from outlet in front/back of the unit.

Feed Water Requirement:

Conductivity <2000 μ S/cm,
Temperature :-<50°C,
SDI (Fouling Index): Upto 12,TDS <1000ppm
Conductivity Cell:- Coaxial,
Cell constant K=1.0 and 0.1/0.01, MOC:SS316L

Other specifications :

Display: Online LCD display for conductivity and % RO Rejection. TDS of Type-II water: Zero
Controller: Microprocessor based micro controller with user interface with alarm indication for product water resistivity and low feed water alarm.
Power Supply:-230V+ 10%,50Hz,AC.
Power Consumption:60Watt/Hour.
Weight(Approx.):10Kgs.
Dimensions: 535 mm(H),330mm(W),280mm(D)

Table Top Model having High Quality ABS/FRP/GI Powder coated material cabinet.

Standard Accessories:-

- (I) Single stage Prefiltration for Lab Pure and LabQ-I Model
- (ii) Three stage Prefiltration for LabQ-II Model
- (iii)Storage Tank 6L/10L/20L/50L with Vent filter and auto cutoff with Level Sensor once the tank is filled.
- (iv)Power Cord
- (v) Instruction manual
- (vi) Bench Top/wall Mounting System

Optional Accessories :

- (I) Three stage Prefiltration for Lab Pure and labQ-I Model
- (ii) UV with 254nm wavelength
- (iii) Tank 20/50 Ltr with vent filter(0.22 μ ,recirculation loop. μ)
- (iv) In built UV sanitization module fixed in the tank.
- (v) EPF 0.22 μ with filling bell having 260cm² EFA
- (vi) High Flow Rate Models on Demand
- (vii) Auto Flush mode for cleaning/sanitization of the system (viii)Water softener if feed water TDS>300
- (ix)Use of Antiscalant instead of chemical sanitization of RO

Optional Utilities for: ANALYTICA/ DIRECT ULTRA/ DURA-Q SERIES/ LABQ-I/II,LAB PURE

- (I)RO Water Unit/ Demineralizer/Softener: RO water unit if TDS>300 and Rechargeable Type having capacity of 25/35/50/100 Ltr/Hr in case the feed water Hardness is very High.
- (ii) Deionizer: Mixed Bed/ Cation- Anion Column based Rechargeable Type DI Plant to decrease the Feed conductivity to the system.

Self Diagnosis and features of Bio-Age Water Purification Systems for all Models:

(Analytica, Ultra Plus, Direct Ultra, and Dura-Q Series)

- Password Protection for the systems. Microprocessor controlled LED/LCD/TFT Graphic display/TFT Touch screen for water dispense.
- R.O. Membrane change alarm with percentage rejection basis and TDS of purified water of all above models is zero.
- Ionic Rejection>99%,Particulate/Silicate rejection>99%,high recovery of RO water up to 60%.
- Low feed water pressure alarm with system switches off to standby and restart after normal feed pressure
- Auto alarm for the UPC/EDI (ZAP US-Make module),Cartridge change, recovery loop with capillary tube and valve after ED! module>80%
- Auto High feed water conductivity alarm and auto shutdown if water quality falls. Inbuilt leak detector in the system for an internal leakage.
- Systems will supplied with calibration certificates, conformity from recognized international agencies & meet internationally recognized safety norms
- Auto alarm for full & empty tank, switches off the system to standby mode with auto restart at low level in water tank.
- Cylindrical PE/HDPE/PP storage tank with conical bottom 6L/10L/20L/50L/100L with multi level sensors, UV Lamp (254nm), dispense pump.
- Consumables will be labelled with RFID tag for better traceability, inbuilt software.
- Auto UV Cartridge change alarm with online hour meter in TFT Graphic display/Touch Screen.
- Auto recirculation loop at stand by mode to the feed water tank when system is at non dispensing mode .
- Auto flush/rinse/sanitization before final dispense of product water. Both fixed & variable volume dispensing(timer based) of product water.
- Auto alarm for EPF/ UF change on Life timer. RS232/USB Interface port, data management and inbuilt software for GLP compliance.
- Optional: Validation documents: IQ, OQ, PQ,MP/DQ and EDI module, remote access, flexible remote arm PVDF dispenser of 1m radius.

Lab Ultra Series™

Water Purification System



Type I Grade Water

Highlights:

- High recovery upto 55% of water with TFC polyamide R.O. module.
- Type-I Water in a Single compact bench top/wall mounting system.
- Ultra Pure Water directly from tap water
- Prefil-I/Prefill-III stage pre filtration setup.
- Most economical Ultra Pure grade water as compared to other systems available in the market.

Product Specifications:

Parameters	Model: Lab-Ultra
Display	16×4 Character LCD
Resistivity	18.2 MOhm.cm at 25°C m at 25°C
Conductivity	0.05µS/cm
Ionic Rejection	> 99%
Inorganics and Particulates Rejection	> 99%
TOC (ppb)	< 5ppb*
Particulates (>0.22µ/ml)	<1
Bacteria (cfu/100ml)	<0.01cfu/ml

Endotoxins/Pyrogens (EU/ml)	<0.001**
Rnase (ng/ml)	<0.001**
Dnase (pg/µl)	<0.005**
Auto Volume Dispense/Product Flow Rate (Type-I)	100 to 500ml/min***
UF Membrane (NMWL/MWCO)	5000 (Optional)
End Point Filter	0.22 micron (EFA: 260cm ²)
% RO Rejection	Yes
Auto Flushing with Customized Times	Yes
Feed Water Monitoring	Yes
Cell Constant (K)	0.01/0.1
Temperature Compensation	0 to 100°C
Low/ High Feed Water Protection	Yes
Tank	Optional
Prefiltration	Three Stage

*With UV Lamp 254nm and

*1-2ppb with dual UV lamp (185nm/254nm)

**With online UF 5000 MWCO

***Depends upon feed water conductivity

Turbidity in NTU of Ultra Pure water <0.02

pH: 7/Neutral with online measurement

Bacteria: Under aseptic condition <1cfu/1000ml ie 0.001cfu/ml

Ionic removal >99% and Silica Rejection >99%

Applications:

HPLC/AAS/GC/Tissue culture/Electrophoresis/PCR/Molecular Biology and any other Grade I water applications.

Technical Specifications:

Product Quality:-Type-I Reagent Grade Water

Feed Water Requirement:

Feed Water Pressure:-0.5Kg -1.5Kg

Conductivity upto 50µS/cm,TOC: upto 200ppb

Temperature:-<50°C, CO2<50ppm,Chlorine:up to 3ppm

Fouling Index: upto 12,Conductivity Cell:-Coaxial,

Other specifications :

Display: Microprocessor based micro controller with Keypad,

TDS : Zero, Weight(Approx.):15Kgs.

Power Consumption:60Watt/Hour.

Power Supply:- 230V+ 10%,50Hz,AC

Dimensions: 535mm(H),330mm(W),280mm(D)

Table Top Model with High Quality ABS material/ GI Powder Coated Cabinet.

Standard Accessories:-

(1) One set of initial Cartridges

(2) One ACP-020-Removes the volatility of organic matter.

(3) One UV 254nm,One set UPC-005

(4) One EPF 0.22µ with filling bell 260 cm2 area PES/PVDF.

(5) Power cords and Instructions manual for both systems

(6) Prefill III stage with cartridge and Pressure Gauge.

(7) R.O. with 100-200 Dalton cutoff having 95-99% rejection.

System diagnostics:-

Rejection % age of R.O module alarm for its replacement.

Low conductivity alarm for changing UPC cartridges.

Low feed water pressure switch to avoid dry run of R.O pump.

Optional Accessories :

(1) Dual Wavelength UV with 254nm/185nm

(2) Online TOC Monitoring of final product

(3) Online pH Monitoring of final product

(4) Storage tank of Higher Capacities 6/10/20/50L with vent filter

(5) Composite vent filter (0.22µ) with CO absorbent

(6) Data logging with PC

(7) Water Softener in case feed water hardness is very high

Self Diagnosis and features of Bio-Age Water Purification Systems for all Models:

(Analytica, Ultra Plus, Direct Ultra, and Dura-Q Series)

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We also undertake Industrial Training for Bio-tech students and industrial Trainees



Bio-Age also has long running special research and training programs for students in the field of biotechnology and life sciences, giving them a unique experience of working close to a real world industrial environment and its workflow. Contact Us for any relevant queries.

Accessories:



Our Certifications:



ISO 9001:2015 Certificate No.:105020819 CE Certificate No.:4248
 ISO 14001:2015 Certificate No. :201150220
 IEC Certificate No.: UQ-2021072278
 WHO-GMP Certificate No.:20CN98990356WG



Find Us

Plot No. 468, JLPL Industrial Area,
 Sector 82 Mohali - 140306, Punjab,
 India

info@bioageindia.com

+91 987 200 4528

www.bioageindia.com

www.bioageindia.org

Walk-ins Welcome

Office Hours

Mondays to Saturday

9 AM - 6 PM

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Note: i) Specifications & Photographs of above models are subject to change without any prior notice due to continuous development in the systems

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