Evatros T.C.S™

Total Concentration System

Your
Absolute Lab
Solution!

goojung engineering

Evatros T.C.S™

Total Concentration System

All in One Solution for your Lab

Evatros C
Gas blowing
Evaporator

Evatros G
N2 & Dry Air
Gas Generator

Evatros T.C.S™
One integrated system

1 + 1 = Innovative One

Evatros T.C.S™ (Total Concentration System) is
all in one solution featuring evaporator, ventilation system, gas generator developed with Goojung Engineering's own technology and know-how.

Your Absolute Lab Solution!

Visible

Goojung ENG's new technology provides you with high visibility in comparison with the existing evaporators. The front window of the evaporator, terraced structure and slit of heating block enable you to monitor comfortably the progress of sample concentration.

Versatile

48 individual on/off switches have independent control of each nozzle and all of these nozzles can be switched on with 4 buttons, each controlling 12 nozzles. A variety of test tube types can be used in accordance with your experimental purposes. These features enable you to concentrate various sample volumes.

Convenient

A heating block system frees you from the hassle of wiping the watery test tubes after sample concentration and the matters of recurring water change and contamination unlike a water bath system. The pull-out shelf of the evaporator enables you to conveniently set up the test tubes.

Cost Effective

A built-in gas generator eliminates ongoing costs associated with re-ordering gas cylinders and reduces the need for paying unnecessary down time costs associated with discontinued experiment incurred by an interruption in gas supply.

Safe

The sealed front door of the fume hood prevents toxic gas leaks and unpleasant smells. Solvent vapors can be vented through the fan on the top. Evatros T.C.S™ has been designed safely based on extensive research of user behavior patterns. The incorporated timer in the evaporator prevents samples from over-drying enabling samples to be safely recovered.

Speedy

Gas blown in five different directions maximizes the efficiency of sample concentration by drying the condensed solvent formed on the wall of the test tube. The adjustable nozzles can move downward to get closer to the samples during operation reducing sample concentration time significantly.

Evatros T.C.S™

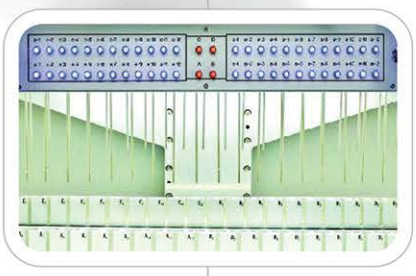
Evatros C

Evatros C MAP

Up to 48 sample concentration

- 48 nozzles for a large volume of samples
- 4 switches controlling 12 nozzles at one time
- Independent control of gas flow and pressure in each nozzle
- Capable of selecting nozzles needed when small amount is required

48 Nozzle



5-way gas blowing nozzle system

- Simultaneous drying of the condensed solvent on the inner wall of the test tube during sample concentration
- Significantly reduced the time of sample concentration

5 way

Automatic control of the nozzle height

Joystick

fine tuning of the nozzle height to move near samples

Set Button

automatic set-up of the nozzles to fit the test tube height

Up/Down Button

adjustment of the nozzle height with the front door closed

- Automatic movement to the default position of the nozzles when the front door opens

Special options for Evatros C

Acid-Proof option

- Teflon coating
  Heating block
  Nozzle
- Fluoride coating
  Hood case

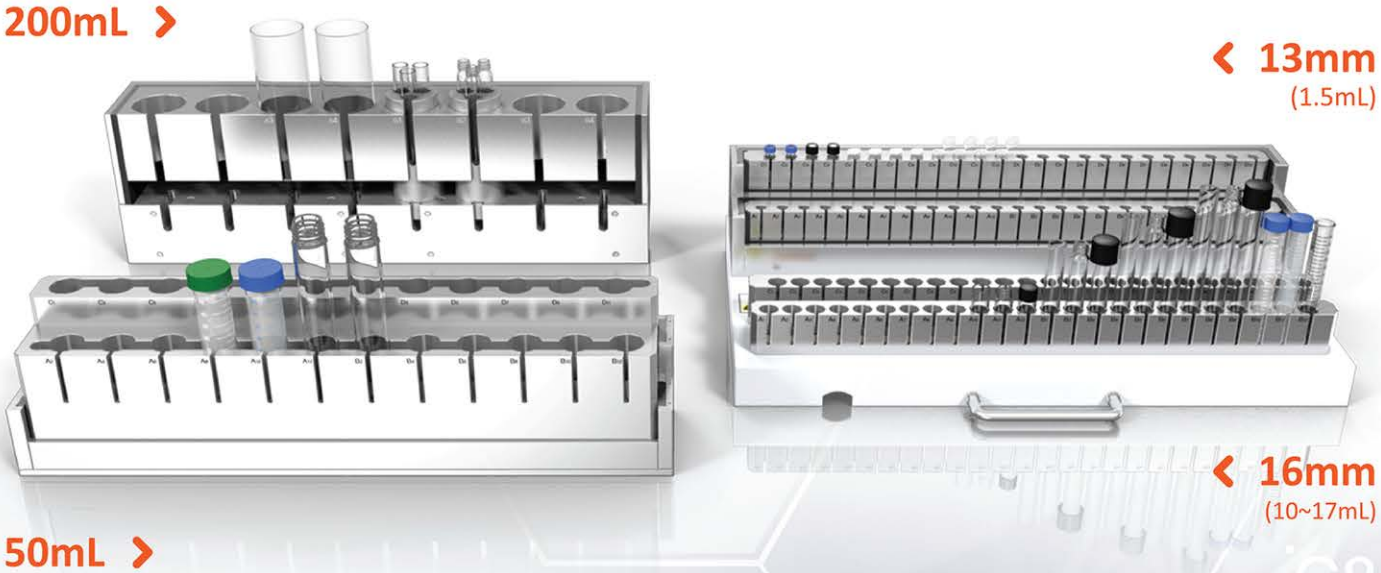
UV blocking option

- UV blocking front window and hood case
- UV blocking board
- UV lamp for inside light

Heating block type option

Heating block	Round test tube	Conical test tube	Eppendorf test tube
48 Nozzles (10 ~ 15㎖)	11, 13mm 15, 16mm	16mm	10.6mm
24 Nozzles (50㎖)	29mm	29mm	
8 Nozzles (200㎖)		51mm	

※ Standard : 16mm, Round test tube

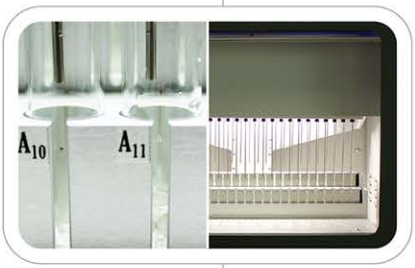


Pull-out shelf

- Pull-out shelf enabling a user to set up samples conveniently
- Automatic sensor preventing the instrument from operating with the shelf pulled-out

Built-in ventilation system

- The sealed front door preventing toxic gas leaks
- Fan on the top venting solvent vapor safely



Easy sample monitor

- The front door: easy observation of the progress of sample concentration through a glass window during operation
- Slit of the heating block : easy monitor of the progress of sample concentration through the slit

Heating block system

- Temperature setting: Ambient ~ 80℃
- Design of thermal protector and temperature sensor keeping aluminum heating block at an constant temperature
- Customized order for the test tube types based on the user's experimental purposes

Timer preventing samples from over-drying

- Set-up time for sample concentration
- Automatic gas shut-off with alarm when operation is finished

Evatros G

Features

- Button to switch between N2 mode and dry air mode
- Built-in dual air compressor system
- High purity nitrogen and dry air through membrane (N2: hollow fiber membrane, Dry air: dry point membrane)
- Sufficient gas flow to an evaporator instrument
- Low noise design
- Being free from the issue of contamination of an existing gas line installed in a user's lab
- Upgrade is easy for each model through the module composition

Evatros T.C.S™ order information

Evatros T.C.S™ part number	Evatros C	Evatros G
EC-1648S	Evatros C (48 Nozzles, 2~15mL)	N2 / Dry Air generator
EC-1648N	Evatros C (48 Nozzles, 2~15mL)	Nitrogen generator
EC-1648A	Evatros C (48 Nozzles, 2~15mL)	Dry Air generator
EC-3024S	Evatros C (24 Nozzles, 50mL)	N2 / Dry Air generator
EC-3024N	Evatros C (24 Nozzles, 50mL)	Nitrogen generator
EC-3024A	Evatros C (24 Nozzles, 50mL)	Dry Air generator
EC-5108S	Evatros C (8 Nozzles, 200mL)	N2 / Dry Air generator
EC-5108N	Evatros C (8 Nozzles, 200mL)	Nitrogen generator
EC-5108A	Evatros C (8 Nozzles, 200mL)	Dry Air generator

Solvent concentration speed

Nitrogen

Solvent	Time (min)
Acetone	4
Methanol	9
Hexane	5
Ethylene Acetate	8
Methylene Chloride	5
Acetonitrile	13

Experimental condition

- Gas : Nitrogen gas (70L/min @30psi)
- Solvent volume: 2ml
- Test tube: 16mm x 150mm
- Temperature: 40℃

Dry Air

Solvent	Time (min)
Acetone	4
Methanol	9
Hexane	3
Ethylene Acetate	5
Methylene Chloride	3
Acetonitrile	9

Experimental condition

- Gas : Dry Air (120L/min @30psi)
- Solvent volume: 2ml
- Test tube: 16mm x 150mm
- Temperature: 40℃

Evaporator specification

Model	Evatros C
Nozzle	48 nozzeles with 5 holes- independent control of flow rate & pressure
Minimum Gas Inlet	Nitrogen Gas 60L/min @30psi, Dry Air 120L/min @30psi
Heating Block Temp.	Ambient ~ 80℃
Electrical Requirements	220[V], 50/60[Hz], 2.5[A]
Dimension(CM)	70(H) x 64(W) x 75(D)
Weight(KG)	95

Gas generator specification

Part number	ES-3600	EN-0600	EA-3000
Nitrogen	60L/min @30psi	60L/min @30psi	Upgradable to Evatros G with swithching kit
Dry Air	120L/min @30psi	Upgradable to Evatros G with swithching kit	180L/min @30psi
Filter	Hollow fiber membrane(N2) Dry point membrane(Air)	Hollow fiber membrane	Dry point membrane
Phthalate	None		
Noise level	50[dB]	50[dB]	50[dB]
Electrical Requirements	220[V], 50/60[Hz], 8[A]		
Dimension(CM)	100(H) X 64(W) X 75(D)		
Weight(KG)	155	155	150

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