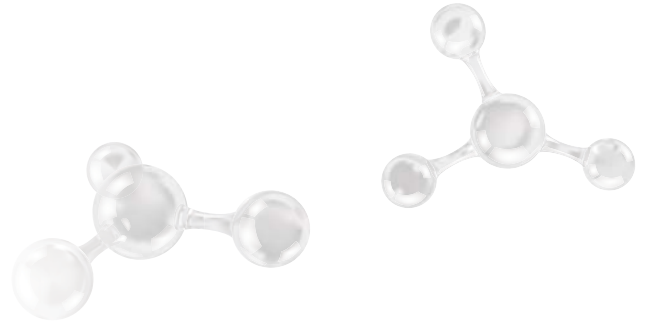
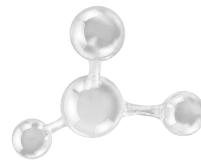


Evatros T.C.S™

Total sample Concentration System



Your
Absolute Lab
Solution!



Evatros T.C.S™

Total sample Concentration System

Evatros T.C.S™ is total sample concentration system for sample preparation featuring an evaporator, hood function and a gas generator. Goojung Engineering Co, Ltd. has designed user-friendly Evatros T.C.S™ based on extensive research of user behavior patterns, and efficiency of sample concentration process and safety has been enhanced.

All in One Solution for your Lab



Evatros C

Gas blowing evaporator

- Up to 48 sample concentration
- Hood function



Evatros G

Gas generator

- N2 or Dry Air supply



Evatros T.C.S™

Total sample Concentration System

- Total sample Concentration System featuring sample concentration, hood and gas generator

Features



- One integrated system featuring an evaporator, hood function and a gas generator
- Up to 48 sample preparation
- Independent gas supply control for each nozzle
- Up/Down button adjusting nozzle position
- 5-way gas blowing nozzle drying the condensed solvent vapor on the inner wall of test tubes
- Aluminum test tube block with heating function (Ambient ~ 80°C)
- Easy observation of the progress of sample concentration through slit of the test tube block
- Production of custom-made test tube block covering a variety of tube shapes or volumes
- Easily replaceable test tube block depending on the sizes of test tubes
- Convenient arrangement of test tubes in a test tube block on Pull & Push shelf
- Timer: automatic gas shut-off with going off alarm when timer setting time is finished
- Built-in hood function venting out toxic gas and unpleasant smell
- (Option 1) Acid-proof option recommendable when using acid solvent
- (Option 2) UV blocking option for samples sensitive to UV

Application field



Food industry



Pharmaceutical industry



Forensic science



Chemical industry



Water quality environment



Agriculture and fishery products



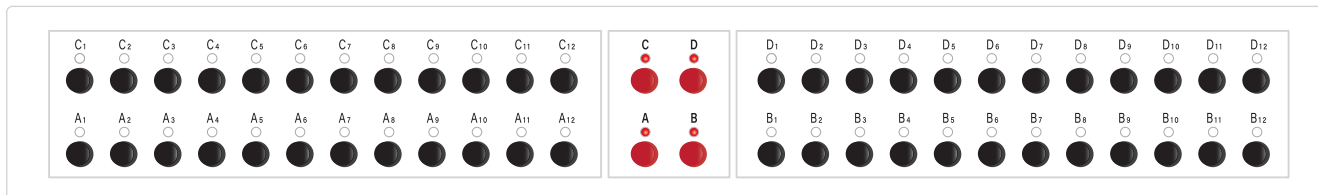
Veterinary research institute



Cosmetic industry

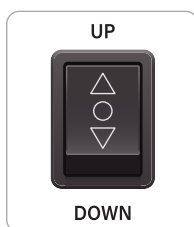
Unique technology of Evatros T.C.S™

1. Independent gas supply for each nozzle



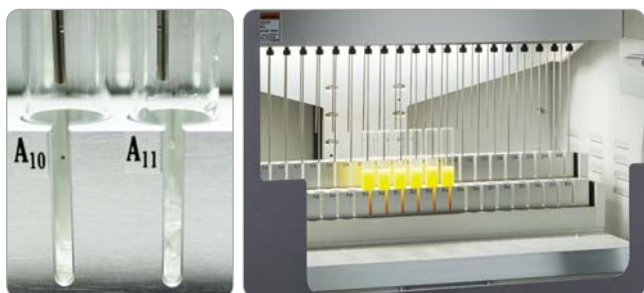
- A lab researcher can control independent gas supply for each nozzle using gas supply buttons.
- Gas can be supplied to all nozzles using 4 red section buttons in the middle.

2. Up and down button for the position of the nozzles



- The position of nozzles can easily be moved up and down using Up/Down button according to the level of solvent.
- When the door of the evaporator is closed, nozzles automatically move down to the top of test tubes.
- ※ Option: Automation function – Nozzles automatically continue moving down keeping a certain distance between the tips of nozzles and solvent level by sensing solvent level.

3. Slit of test tube block



- Sample concentration progress can easily be observed through the slit of test tube block.
- Test tube block arranged in the terraced structure enables a lab researcher to observe sample concentration progress for test tubes in the 2nd tier block.
- Temperature of test tube block can be set at up to 80°C.

4. Pull & Push shelf



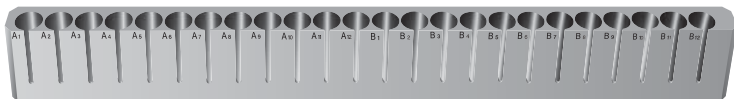
- A lab researcher can conveniently arrange test tubes in the test tube block after a test tube rack can be placed on Pull & Push shelf.
- After test tubes are arranged in the test tube block, Pull & Push shelf should be completely pushed in to the original position for operation, otherwise a sensor prevents nozzles from moving up/down.

※ Benefits of heating method using aluminum test tube block

- No cumbersome work like changing regularly water in a bath
- No concerns about instrument corrosion caused by water over time
- No risk of contamination by water drop into other test tubes when taking out a test tube

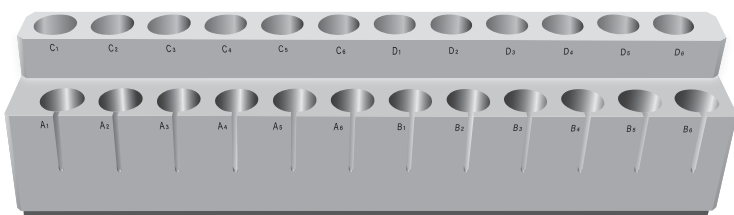
Test tube block types for Evatros C models

1. EC-1648(48 Sample concentration)



- Test tube diameter: 16mm
- Tube volume: 8mL~17mL
- Tube bottom type: Round
- Tube block configuration: 2 x 24 holes block
- Part number: GJ-00477

2. EC-3024(24 Sample concentration)



- Test tube diameter: 30mm
- Tube volume: 50mL
- Tube bottom type: Conical & Round
- Tube block configuration: 1 x 24 holes block
- Part number: GJ-00534

※ Test tube bottom shape



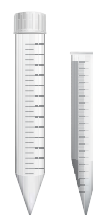
Round type or vial-16mm or 30mm (Block of EC-1648 or EC-3024)



Conical type-30mm (Block of EC-3024)



0.5 ~ 2mL tubes (Accessory tube blocks)



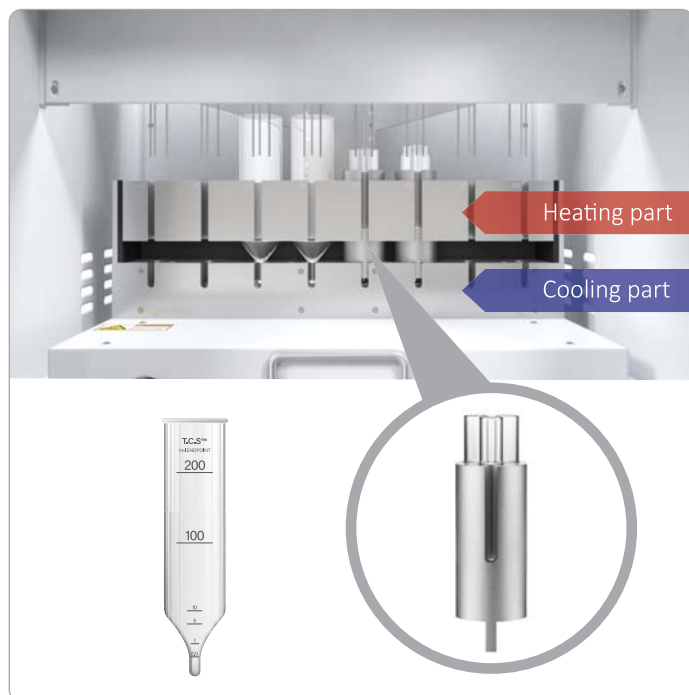
10~16mL conical type (Accessory tube blocks)



End-point type – 50mL (Accessory tube blocks)

- Additional test tube blocks for test tubes of various diameters and bottom shapes can be ordered, and the test tube blocks can easily be replaceable in EC-1648 or EC-3024 model.

3. EC-5108(8 Sample concentration)



- Test tube diameter: 51mm
- Tube volume: 200mL
- Tube block configuration: 1 x 8 holes block (Not switchable)
- Cooling part of the test tube block makes test tubes leave sample in end-points.

200mL test block is fixed and not replaceable with other size of blocks. Instead an adapter applicable for other size of test tubes can be offered as an accessory if a lab researcher needs to use smaller volume of test tubes as well.

Evatros T.C.S models

Part No.	No. of samples	Tube type	Tube diameter	Nitrogen	Dry Air	Tube volume
EC-1648S	48	Round	16mm	Yes	Yes	8~17mL
EC-1648N	48	Round	16mm	Yes	No	
EC-1648A	48	Round	16mm	No	Yes	
EC-3024S	24	Conical	30mm	Yes	Yes	50mL
EC-3024N	24	Conical	30mm	Yes	No	
EC-3024A	24	Conical	30mm	No	Yes	
EC-5108S	8	End-Point	51mm	Yes	Yes	200mL
EC-5108N	8	End-Point	51mm	Yes	No	
EC-5108A	8	End-Point	51mm	No	Yes	

- If different type or diameter test tubes need to be used, additional test tube blocks can be ordered as accessories.
- Evaporator (Evatros C) and Gas generator (Evatros G) can separately be ordered.
- When Evatros C is only ordered, a lift table for Evatros C is recommendable if a customer doesn't have a table for the evaporator.

Separate part numbers of Evatros C and G



Test tube accessories

Part No.	Test tube type	No. of holes	Diameter of test tube block	Tube volume	Evatros C P/N
GJ-00473	Eppendorf	24	10.8mm	2mL	EC-1648
GJ-00474	Round	24	11.7mm	2mL	
GJ-00475	Round	24	13.0mm	7mL	
GJ-00644	Round	24	14.0mm	8mL	
GJ-00645	Round	24	15.3mm	10~16mL	
GJ-00646	Round	24	18.4mm	10~16mL	
GJ-00478	Conical	24	16.3mm	10~16mL	
GJ-00647	Round(Adapter)	24	20.3mm	20mL	
GJ-00649	Round(Adapter)	24	28.0mm	20mL	
GJ-00650	Round(Adapter)	36	16.0mm(1 st tier) & 20.0mm(2 nd tier)	10~20mL	
GJ-00652	Round(Adapter)	36	16.0mm(1 st tier) & 30.0mm(2 nd tier)	10~20mL	
GJ-00479	Conical(Adapter)	24	30mm	50mL	
GJ-00535	End-Point	24	33mm	50mL	
GJ-00469	Round	3	16.3mm	10~16mL	EC-5108
GJ-00471	Conical	3	17.3mm	10~16mL	

Evatros C Options

Option 1 – acid-proof option

If acid solvent is used, acid proof option is recommendable to prevent Evatros C from corrosion.

Option 2 – UV blocking option

If samples are sensitive to UV, UV blocking option is recommendable.

Evaporator specification

Product name	Evatros C		
Part number	EC-1648	EC-3024	EC-5108
No. of samples	48	24	8
Diameter of test tube(mm)	16	30	51
No. of nozzles	48	24	24*
Heating method	Aluminum test tube block (No need to use water)		
Temperature range	Ambient ~ 80°C		
Electrical requirements	220[V], 50/60[Hz], 2.5[A]		
Dimensions(CM)	80(H) x 64(W) x 75(D)		
Weight(KG)	98	98	107
Inlet gas requirement(N ₂)**	60L/min @ 30 psi		
Inlet gas requirement(Dry Air)**	120L/min @ 30 psi		

* 3 Nozzles blow gas out into one test tube.

** User could select either N₂ or Dry Air.

Gas generator specification

Product name	Evatros G		
Part number	ES-3600*	EN-0600	EA-3000
N ₂ flow rate	60L/min	60L/min	-
Dry Air flow rate	120L/min	-	180L/min
Pressure	30 psi		
Filter	Hollow fiber membrane(N ₂) Dry point membrane(Air)	Hollow fiber membrane	Dry point membrane
Phthalate	None		
Noise level	50[dB]		
Electrical requirements	220[V], 50/60[Hz], 8[A]		
Dimensions(CM)	100(H) x 64(W) x 75(D)		
Weight(KG)	160	160	155

* Switch button of Evatros G can switch a gas mode between N₂ and Dry Air.



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