

Nitrogen Evaporator



Sample Evaporation & Concentration



Nitrogen Evaporator (AT-EV-50)

It is fully automatic microprocessor controlled and water bath, temp., gas station, more advantage LCD digital display

- Temperature RT - 99 °C
- 50 positions with user selectable racks for greater flexibility
- 1.5 - 30 ml volume



Nitrogen Evaporator (AT-EV-08)

It is fully automatic microprocessor controlled and water bath, temp., gas station, more advantage LCD digital display

- Temperature RT - 99 °C
- 08 positions with user selectable racks for greater flexibility
- 50 - 250 ml volume



Nitrogen Evaporator (AT-EV-24) ASE Ichem vial

It is fully automatic microprocessor controlled LCD digital display.

- Compatible to I-Chem Vial
- Temperature RT - 99 °C
- 24 positions with user selectable racks for greater flexibility
- 40 - 60 ml volume



Nitrogen Evaporator (AT-EV-100) & (AT-EV-150)

It is fully automatic microprocessor controlled and water bath, temp., gas station, more advantage LCD digital display

- Temperature RT - 99 °C
- 100 & 150 positions with user selectable racks for greater flexibility
- 1 ml - 5 ml volume
- For Bio Analytical Lab
- For SPE - 96 & 144 Sample Evaporation



Nitrogen Evaporator (AT-EV-96)

It is fully automatic microprocessor controlled LCD digital display.

- Temperature RT - 99 °C
- 2 positions with individual gas regulation
- Compatible with 96-well standard or deep well plates



Nitrogen Evaporator (AT-EV-144) Compatible of 144 SPE Rack

It is fully automatic microprocessor controlled and water bath, temp., gas station, more advantage LCD digital display

- Temperature RT - 99 °C
- 144 positions with user selectable racks for greater flexibility
- 1 ml - 5 ml volume
- The SPE plasma waste collected in 144 Tube and same rack fit to 144 Nitrogen Evaporator to evaporator the same.



Nitrogen Evaporator (NANO 15 / 25) EI Approved machines for Fisheries Sample 25 from

It is fully automatic microprocessor controlled and water bath, temp., gas station, more advantage LCD digital display

- Temperature RT - 99 °C
- 25 positions with user selectable racks for greater flexibility
- 1.5 - 30 ml volume





















Dry Evaporator Automated Drying Dry Block Heating

It is fully automatic microprocessor controlled LCD digital display

- Temperature RT - 99 °C
- 50 positions with user selectable racks for greater flexibility
- 1.5 - 30 ml volume



Model	Sample Capacity	Sample Volume	Key Applications	Sample Solvents	Test tubes
AT-EV-50 	50	1 ml to 30 ml	<ul style="list-style-type: none"> BioAnalytical Lab Forensic, clinical chemistry, food, and pharmaceutical laboratories for concentration of solvents following SPE clean-up of drug samples or pesticide extracts. Fisheries extraction LCMSMS solvent evaporation SPE Pharmaceutical compound registration Synthetic intermediate isolation 	TEMP Ambient to 99 °C <ul style="list-style-type: none"> Methanol Ethyl acetate Acetone Acetonitrile Isopropyl Ether Ethylene Chloride Dichloromethane Ethanol N hexane Water Toluene Trifluoroacetic acid (TFA) 2% Trichloroacetic acid (TCA) 2% Formic acid 5% Acetic acid 10% Butyric acid 5% Phosphoric acid 5% Hydrochloric acid 0.1M Nitric acid 0.1M Propionic acid 5% Ammonium Hydroxide 5% Triethylamine (TEA) 5% Methylene chloride DFM (Dimethyl formamide) THF (Tetrahydrofuran) DMSO (Dimethyl sulfoxide) Propan-2-ol Dichloromethane MeCN 	
AT-EV-24 	24	40 ml to 60 ml 40 ml or 60 ml ASE tubes	<ul style="list-style-type: none"> Food, water, soil and environmental solvent extraction Environmental samples Agrochemical samples Forensic and crime samples Drugs of abuse samples Food and beverage analysis Pharmaceutical biotech compounds Clinical samples Remote locations 		
AT-EV-08 	8	80 ml to 250 ml	<ul style="list-style-type: none"> Forensic, clinical chemistry, food, and pharmaceutical laboratories for concentration of solvents following SPE cleanup of drug samples or pesticide extracts. Supplied in BIS (Bureau of Indian Standard) Pharmaceutical biotech compounds Clinical samples Environmental samples Forensic and crime samples Drugs of abuse samples Food and beverage analysis Agrochemical samples 		
AT-EV-100 	100	1.5 ml to 5 ml	<ul style="list-style-type: none"> Bio Analytical labs SPE 96 processor collection sample Evaporation LCMSMS solvent evaporator Pharmaceutical biotech compounds Clinical samples Environmental samples Drugs of abuse samples 		
Nano-25 	25	1 ml to 30 ml	<ul style="list-style-type: none"> Mainly in Fisheries 15 ml conical tube for Fish, Casters, prawns. Food testing BIS EI approved Fisheries Exporter of India Pharmaceutical compound registration Synthetic intermediate isolation 		
AT-EV-96 	96 x 2 plate Upto 2 ml	96 well	<ul style="list-style-type: none"> Clinical samples Pharmaceutical biotech compounds Environmental samples Forensic and crime samples Drugs of abuse samples Food and beverage analysis Agrochemical samples 		
AT-EV-144 	144	1 ml to 5 ml SPE-144	<ul style="list-style-type: none"> Positive Pressure SPE 144 12 x 75mm tube collection rack compatible. SPE 144 ria vial 4ml collection rack can fit to 144 Nitrogen Evaporator Mostly used in Bio Analytical lab 		
AT-EV-150 	150	1 ml to 5 ml	<ul style="list-style-type: none"> Bio Analytical labs SPE 144 processor collection sample Evaporation LCMSMS solvent evaporator 		
AT-EV-50D 	50	1 ml to 30 ml	<ul style="list-style-type: none"> Dry Type Evaporator without water Heating by Dry block heating Aluminium Dry block Pharmaceutical biotech compounds Clinical samples Environmental samples Forensic and crime samples Drugs of abuse samples Food and beverage analysis Agrochemical samples Heat Block type 		

Nitrogen Evaporator

50 Sample Concentrator / Evaporator

Nitrogen Evaporator Model: **AT-EV-50** is a Precision Sample Concentrator by Nitrogen Purging. It is a newly designed Sample Concentrator for multiple sample pre-concentration of in organic media. A Table Top Model. The unit can be set to a constant Flow and constant Temperature to ensure good evaporation.

It is fully microprocessor controlled and water bath, Temperature, gas station, more advantage LCD display, over Temp. Heater ON/OFF LED, door open display, high temperature Thermal cutoff for safety for best quality and best performs.

Athena offer a range of Nitrogen Evaporator Concentration Workstations for sample evaporation. This guide is designed to help you select the most suitable Nitrogen Evaporator for your research requirements. All Nitrogen Evaporator use a vortex evaporation technology that increases the speed of evaporation by a factor of 10 compared to other techniques. The combination of gas flow and temperature is then used to optimise the sample drying. Nitrogen is recommended as the best choice for the gas because it is inert and minimises the risk of oxidation.

As gas usage can be high if large numbers of samples are prepared a Nitrogen generator or bulk liquid nitrogen supply is recommended to minimise cylinder handling.

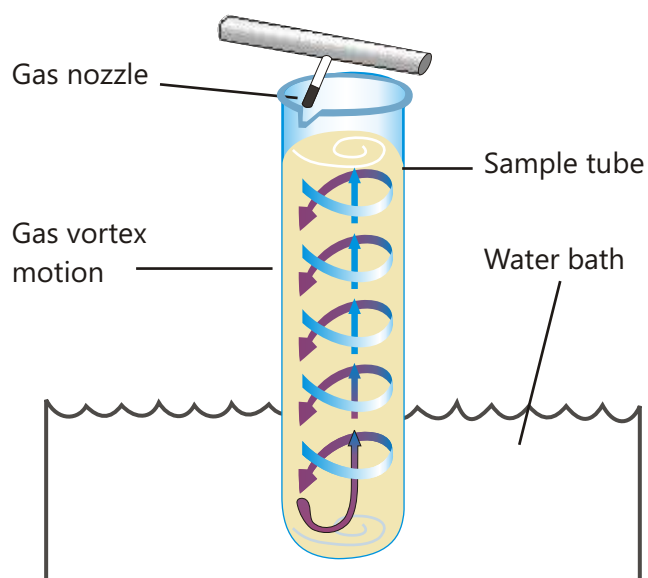


ATHENA Special Features of AT-EV-50 / 08 / 24 / 100:

- Compact Size Table top Model.
- Precise manufacturing using latest technology -Water Jet Cutting & CNC fabrication
- High Quality Pressure Gauge from Wika.
- Side Handles for easy movement
- SS 316 tank & Nozzle Manifold for durability and maintenance free
- Best Quality powder coating for great looks & to avoid rusting
- Silicon Heater with SS316 Water bath Tank system
- Specially Designed for fast & uniform heating
- Tank & Body gap is well insulated with imported Glass wool Sheet to avoid heat loss.
- Digital LCD Display
- Auto Cut off with precision sensor for Time, temperature & gas flow
- Best quality Pneumatic Fitting from Janatics& Parker operation
- Efficient & adjustable ventilation with Built-in exhaust fan with blower
- 2mtr 1.5" ID Polyethylene Exhaust hose for easy ventilation
- 5 Nitrogen Control valves with ON/OFF Switches
- 50 nitrogen-dispensing nozzle in five horizontal rows
- Self glowing Power ON/OFF Switch
- Automated Solvent Drying, Solvent Evaporation and Sample Concentration
- Evaporation Medium : Nitrogen Gas
- Fast evaporation
- Microprocessor-controlled vortex motion increases surface area for faster evaporation.
- Maintenance-free, microprocessor-controlled motor provides smooth variable-speed power to drive the vortex motion.
- Audible alarm with automatic shut down for timed endpoint

Product Specifications:

- Vortex Shearing Concentration
- Time Range: 15 sec to 10 hours
- Time Set-up / down arrow keys (15 sec increments)
- Temperature range: Ambient to 99 °C
- Temperature set-up / down arrow keys (1 °C increment)
- Start/stop: Green LED indication when process is On
- Gas stations: 5 Nos. with LED indication
- Gas regulator range: 0 to 100 PSI (approx)
- Pressure gauge range: 0 to 100 PSI
- Controlled: Fully Microprocessor based
- Sample capacity: 50 Nos.
- Gas Line: 5 Nos.
- Dimensions: 30cm(H) x 40cm(W) x 55cm(L)
- Weight: 20 Kgs
- Power supply: 230 V AC / 3Amp 50 Hzs
- Error indication: LED indication with Buzzer
- Easy ON/OFF switches to turn Nitrogen Flow on or off to the nozzle above the sample vials



Nitrogen Evaporator

100 Samples Nitrogen Evaporator

Nitrogen Evaporator Model: **AT-EV-100** is a Precision Sample Concentrator by Nitrogen Purging. It is a newly designed Sample Concentrator for multiple sample pre-concentration of in organic media. A Table Top Model. The unit can be set to a constant Flow and constant Temperature to ensure good evaporation.

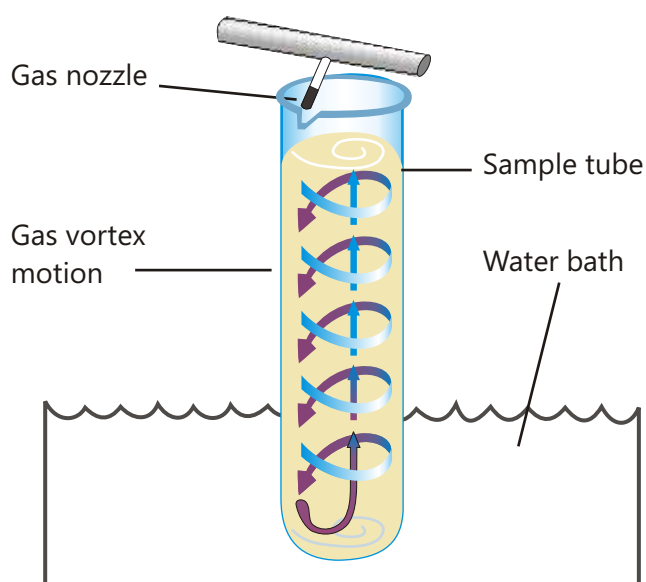
It is fully microprocessor controlled and water bath, Temperature, gas station, more advantage LCD display, over Temp. Heater ON/OFF LED, door open display, high temperature Thermal cutoff for safety for best quality and best performs.

Nitrogen Evaporator is an automated high speed, small volume sample concentrator. It is specially designed for small sample volumes and large batches.

The designed for Nitrogen Evaporation of solvents in analysis in drug testing labs. It is ideal for sample volumes from 1 mL to 5 mL.

A micro-processor control maintains the water bath at the set temperature and the times for the operation. Gas can be turned ON in selected manifold depending on number of samples. Nitrogen gas is blown through nozzle manifolds into samples which turn off automatically. Audio alarms indicate when the process is complete.

Nitrogen Evaporator sample concentrate is a fast & convenient way of concentrating multiple sample at once. This in combination with the heat from the Nitrogen Gas Purging below produced ideal condition for fast & efficient Evaporator. The standard 100 sample Nitrogen Evaporator is ideal for sample volumes of 1 mL to 5 mL that need to be evaporated in GC, HPLC, LCMS vials, micro-centrifuge tubes, conical bottom tubes or test tubes. This instrument offers a high throughput of 100 sample positions using the standard range of different sizes racks available. Evaporation is based on a water bath to give an even temperature and a gas flow delivered over a set time period. This gives the option to evaporate samples to dryness if required and reconstitute with an alternative solvent.



The evaporator uses a gas vortex concentration that maintains high evaporation rates regardless of sample height in the tubes. A helical flow of air is created by the stream of gas directed into each sample tube. The helical flow sets up a vortexing action that provides for sample homogeneity and continuous rinsing of the tube wall. The vapor-laden gas exits via an unobstructed path up the center portion of the tubes and is removed by an exhaust fan to the exhaust port in the back of the unit.



Product Specifications:

- Vortex Shearing Concentration
- Time Range: 15 sec to 10 hours
- Time Set-up / down arrow keys (15 sec increments)
- Temperature range: Ambient to 99 °C (thermal cutout)
- Temperature set-up / down arrow keys (1°C increment)
- Start/stop: Green LED indication when process is ON
- Gas stations: 5 Nos. with LED indication
- Display: LCD Digital
- Capacity: 4 mL (12 x 75); 5 mL (12 x 100), 10 ml (16 x 100)
- Gas regulator range: 0 to 100 PSI (approx)
- Pressure gauge range: 0 to 100 PSI
- Controlled: Fully Microprocessor based
- Sample capacity: 100 Nos. (AT-EV-100)
- Gas Line: 5 Nos.
- Water tank capacity: 7 Ltr.
- Colour: Athena Hammer Tone Gray
- Exhaust: 1/2" Hose Pipe of 1 mtr. length
- CE & ISO 9001-2008 Certified
- Weight: 21 kgs
- Dimensions: 30cm(H) x 40cm(W) x 60cm(L)



Nitrogen Evaporator

24 Samples (I-Chem Vial -40ml & 60ml Tube Vials)



Nitrogen Evaporator Model: **AT-EV-24** is a Precision Sample Concentrator by Nitrogen Purging. It is a newly designed Sample Concentrator for multiple sample pre-concentration of in organic media for Vortex Motion Concentration and ASE (Dionex) Compatible upgrade Kit (For I-Chem vial 40mL, 60mL). A Table Top Model. The unit can be set to a constant Flow and constant Temperature to ensure good evaporation.

It is fully microprocessor controlled and water bath, Temperature, gas station, more advantage LCD display, over Temp. Heater ON/OFF LED, door open display, high temperature Thermal cutoff for safety for best quality and best performs.

The Nitrogen Evaporator concentrates organic solvent extracts using steam and nitrogen. This set-up is ideal for environmental analysis. The vortex shearing action provides rinsing as the sample concentrates to maximize recoveries. The 24 position standard internal rack in the Nitrogen Evaporator for 40 & 60ml tube. For volumes greater than 30 mL, an ASE compatible version of Nitrogen Evaporator is available for use in conjunction with Dionex ASE 200 columns.

Product Specifications:

- Sample capacity : 24 Nos. (AT-EV-24)
- Gas stations : 3 Nos. with LED indication
- Sample Capacity : 40ml & 60 ml Test Vials
- Vortex Shearing Concentration
- Time Range: 15 sec to 10 hours
- Time Set-up / down arrow keys (15 sec increments)
- Temperature range: Ambient to 95°C (thermal cutout)
- Temperature set-up / down arrow keys (1°C increment)
- Start/stop: Green LED indication when process is ON
- Gas stations: 5 Nos. with LED indication
- Display: LCD Digital
- Controlled: Fully Microprocessor based
- Sample capacity: 24 Nos. (AT-EV-24)
- Gas Line: 3 Nos

Applications

- Pharmaceutical biotech compounds
- Clinical samples
- Environmental samples
- Petrochemicals
- Forensic and crime samples
- Drugs of abuse samples
- Food and beverage analysis
- Agrochemical samples

Nitrogen Evaporator

8 Samples High Volume



Nitrogen Evaporator Model: High volume **AT-EV-08** is a Precision Sample Concentrator by Nitrogen Purging. It is a newly designed Sample Concentrator for multiple sample pre-concentration of in organic media. A Table Top Model. The unit can be set to a constant Flow and constant Temperature to ensure good evaporation.

It is fully microprocessor controlled and water bath, Temperature, gas station, more advantage LCD display, over Temp. Heater ON/OFF LED, door open display, high temperature Thermal cutoff for safety for best quality and best performs. In our High Volume with 8 sample Evaporation System efficiently concentrates samples prior to analysis by LC/MS or other analytical instruments. Turbo Evaporator is suitable for evaporation of large volumes after liquid-liquid extractions.

Product Specifications:

- Time Range : 15 sec to 10 hours
- Time Set-up / down arrow keys (15 sec increments)
- Temperature range : Ambient to 95 °C (thermal cutout)
- Temperature set-up / down arrow keys (1°C increment)
- Start/stop : Green LED indication when process is ON
- Display : LCD Digital
- Gas stations : 2 Nos. with LED indication (AT-EV-08)
- Gas regulator range : 0 to 100 PSI (approximate)
- Pressure gauge range : 0 to 100 PSI
- Controlled : Fully Microprocessor based
- Sample capacity : 8 Nos samples (Beaker)
- Gas Line : 2 Nos
- Colour : Athena Blue /Green
- Exhaust: 1/2" Hose Pipe of 1 mtr. length

Technical Specifications:

- Space requirements : Table top or fume hood with minimum dimension L, W & H (cms) 70 x 50 x 65 table weight capacity 35 kg minimum requirement
- Work area : Flat, level, stable, surface
- Power supply : 230 AC/5amp single phase stable & well grounded
- Gas supply : Laboratory grade nitrogen
- Inlet pressure : 60 PSI minimum, 100 PSI maximum (And ON/OFF control valve)
- Exhaust: Exhaust duct outlet or fume hood - the exhaust duct must go to outside the lab.
- Water bath capacity : 6.5 Ltr. distilled water (6.5 Ltr. do not over flow)

Accessories



Rack size for AT-EV-50 & Nano-25

Rack Type	Working volumes	Type Of Test Tube
12mm x 40mm	2 ml	Eppendorf
12mm x 75mm	0.4ml	Round Surface
12mm x 100mm	0.5 ml	Round Surface
16mm x 100mm	1.0 ml	Round Surface
15mm x 125mm	1.1 ml	Round Surface
15mm x 150mm	1.2 ml	Round Surface
17mm x 125 mm	1.5 ml	Conical
17mm x 150 mm	1.6 ml	Round Surface
18mm x 150mm	2.0 ml	Round Surface
20mm x 150mm	3.0 ml	Round Surface

Rack size for AT-EV-24

Rack Type	Working volumes	Type Of Test Tube
28mm x 95mm	4.0 ml	Round Surface
28mm x 140mm	6.0 ml	Round Surface

Rack size for AT-EV-08

Rack Type	Working volumes	Type Of Beaker
50 x 70mm 100ml	80ml	1ml with End Point
60 x 80mm 150ml	120ml	1ml with End Point
70 x 95mm 200ml	200ml	1ml with End Point

Griffin Low Form, with Spout Beaker also available

Rack size for AT-EV-100, 150 & 144

Rack Type	Working volumes	Type Of Test Tube
12mm x 75mm	0.4 ml	Round Surface
12mm x 100mm	0.5 ml	Round Surface
10mm x 40mm	0.2 ml	Eppendorf

Accessories

- One rack will be supplied with Nitrogen Evaporator
- Standard Fittings, Exhaust Hose Pipe, PU Fittings & Tubing, Clamps & Power Cord
- Nozzle Cap 50 Nos. supplied
- Operational Manual, IQ/OQ/PQ & CE Certificate will be provided

We can also supply

NITROGEN GAS GENERATOR for Evaporator

Nitrogen Gas Generators for Food Packing & Purging Nitrogen Plant Gas Generator

Capacity 100 LPM to 10000 LPM



Pharma & CRO



Foods & Sea Food Fishries



International Client



ATHENA TECHNOLOGY

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