

Ultravap® Range of Blowdown Evaporators

Intuitive, automation-ready instruments for reproducible concentration of samples

Models

Ultravap® Mistral® for Microplates | Ultravap® Mistral® XT150 for Glass Tubes (up to 150 mm) | Ultravap® Levante®



The Ultravap® Mistral®, Ultravap® Mistral® XT150 and Ultravap® Levante® evaporators from Porvair Sciences are designed to remove the traditional laboratory ‘bottleneck’ of solvent evaporation from multi-well plates and glass tubes. The new flat front profile and platform shuttle enables greater interfacing with liquid-handling robots for increased automation efficiency. Reproducible sample throughput is achieved by recent advancements in gas injection technology to directly and consistently deliver heated gas in each well and tube. The Ultravap® range of instruments are the most sophisticated automation-friendly model from Porvair Sciences offering significant throughput advantages to laboratories looking to optimize sample preparation.

Key Features

- **Automation-Friendly:** Flat front profile and platform shuttle (Ultravap® Mistral®, Ultravap® Mistral XT150) for greater interfacing with liquid-handling instruments
- **Reproducible Evaporation:** Advanced head technology for consistent gas injection (up to 80°C) in each tube and well
- **High Sample Throughput:** Choice of 12-, 24-, 48-, 96- and 384 needle heads (Ultravap® Mistral® & Ultravap® Levante®) & custom needle heads (Ultravap® Mistral® XT150)
- **Clean Concentration:** System built to eliminate risk of cross-contamination
- **Ideal for sensitive samples:** Bulk of sample remains at ambient, only the surface is heated
- **Intuitive Design:** Slim and compact bench-friendly design with built-in LED lights for greater sample visibility

Ultravap® Mistral® instruments have been designed in closely with leading laboratory liquid handling robots and is suitable for integration directly with a wide range of manufacturers’ robots including:

Hamilton • Tecan® • Perkin Elmer • Beckman Coulter

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Ultravap® Mistral®

Intuitive, automation-ready sample evaporator for microplates

The Ultravap® Mistral® from Porvair Sciences are designed to remove the traditional laboratory 'bottleneck' of solvent evaporation from multi-well plates. The new flat front profile and platform shuttle enables greater interfacing with liquid-handling robots for increased automation efficiency. Reproducible sample throughput is achieved by recent advancements in gas injection technology to directly and consistently deliver heated gas in each well and tube. The Ultravap® Mistral® is the most sophisticated automation-friendly model from Porvair Sciences offering significant throughput advantages to laboratories looking to optimise sample preparation.



Key Features

- **Automation-Friendly:** Flat front profile and platform shuttle for greater interfacing with liquid-handling instruments
- **Reproducible Evaporation:** Advanced head technology for consistent hot gas injection (up to 80°C) in each tube and well
- **High Sample Throughput:** Choice of 12-, 24-, 48-, 96- and 384 needle heads
- **Clean Concentration:** Built to eliminate risk of cross-contamination. Ideal for sensitive samples
- **Ideal for sensitive samples:** Bulk of sample remains at ambient, only the surface is heated
- **Intuitive Design:** Slim and compact bench-friendly design with built-in LED lights for greater sample visibility

Efficient Sample Concentration

With a choice of custom needles heads, most common chromatography solvents can be evaporated with ease, including dichloromethane, methanol, acetonitrile and hexane. The choice of straight or spiral needles allows users to choose between faster dry down (spiral) and better final drying in V-well plates (straight).

- Increased temperature range up to 80°C
- Wide range of needle heads: 12-, 24-, 48-, 96- and 384
- Suitable for use with solvents such as dichloromethane, methanol, acetonitrile, hexane and aqueous solvents
- Consistent heated gas injection for faster evaporation times

Solvent (500 µl)	Evaporation time at 60°C
Methanol	6 mins
Acetonitrile/Methanol (50:50)	6 mins
90% Acetonitrile + Water	8 mins
Water	35 mins
DMSO	48 mins

Flexible Programming

The evaporation table is able to rise under the control of a stepper motor as the drying process proceeds. This can be programmed at a suitable rate for each solvent type being evaporated. From the intuitive colour touch screen display, gas temperature, pressure and flow rate can all be programmed individually and stored in up to 15 multi-step programmes on the instruments controller. Each programme allows up to 5 distinct ramped phases, so that a fast initial drying period can be followed by a gentle final drying phase. Standard control commands stored on Ultravap® Mistral® are compatible with drivers of most robot manufacturers making integration a seamless process.

- Temperature management up to 80°C
- Up to 15 stored evaporation programmes & up to 5 programmable steps
- Pause mode for real-time monitoring of evaporation
- Energy-saving Eco mode for extended heater and fan life

Flexibility in the Production Environment

The Ultravap® Mistral® core software has been specially coded to allow simultaneous control of multiple Mistral® operating units from a single, primary Mistral® evaporator. Using the latest CAN interface technology, the units can be connected together in series. A method selected on a primary unit will be automatically distributed over the CAN Bus to all downstream units to run the programme simultaneously.

Ultravap® Mistral® instruments have been designed in closely with leading laboratory liquid handling robots and is suitable for integration directly with a wide range of manufacturers' robots including:

Hamilton Robotics • Tecan • Perkin Elmer • Beckman Coulter

Ultravap® Mistral® XT150

Intuitive, automation-ready sample evaporator for glass tubes

The Ultravap® Mistral® XT150 from Porvair Sciences are designed to remove the traditional laboratory 'bottleneck' of solvent evaporation from glass tubes. The new flat front profile and platform shuttle enables greater interfacing with liquid-handling robots for increased automation efficiency. Reproducible sample throughput is achieved by recent advancements in gas injection technology to directly and consistently deliver heated gas in each tube (up to 150 mm in height). The Ultravap® Mistral® XT150 is the most sophisticated automation-friendly model from Porvair Sciences offering significant throughput advantages to laboratories looking to optimise sample preparation.



Key Features

- **Automation-Friendly:** Flat front profile and platform shuttle for greater interfacing with liquid-handling instruments
- **Reproducible Evaporation:** Advanced head technology for consistent hot gas injection (up to 80°C) in each tube and well
- **Clean Concentration:** Built to eliminate risk of cross-contamination. Ideal for sensitive samples
- **Ideal for sensitive samples:** Bulk of sample remains at ambient, only the surface is heated
- **Intuitive Design:** Slim and compact bench-friendly design with built-in LED lights for greater sample visibility

Efficient Sample Concentration

With a choice of custom needles heads, most common chromatography solvents can be evaporated with ease, including dichloromethane, methanol, acetonitrile and hexane. The choice of straight or spiral needles allows users to choose between faster dry down (spiral) and better final drying in V-well plates (straight).

- Increased temperature range up to 80°C
- Custom needle heads available with multiple needles per tube for faster drying
- Suitable for use with solvents such as dichloromethane, methanol, acetonitrile, hexane and aqueous solvents
- Consistent heated gas injection for faster evaporation times

Flexible Programming

The evaporation table is able to rise under the control of a stepper motor as the drying process proceeds. This can be programmed at a suitable rate for each solvent type being evaporated. From the intuitive colour touch screen display, gas temperature, pressure and flow rate can all be programmed individually and stored in up to 15 multi-step programmes on the instruments controller. Each programme allows up to 5 distinct ramped phases, so that a fast initial drying period can be followed by a gentle final drying phase. Standard control commands stored on Ultravap® Mistral® XT150 are compatible with drivers of most robot manufacturers making integration a seamless process.

- Temperature management up to 80°C
- Up to 15 stored evaporation programmes & up to 5 programmable steps
- Pause mode for real-time monitoring of evaporation
- Energy-saving Eco mode for extended heater and fan life

Flexibility in the Production Environment

The Ultravap® Mistral® core software has been specially coded to allow simultaneous control of multiple Mistral® operating units from a single, primary Mistral evaporator. Using the latest CAN interface technology, the units can be connected together in series. A method selected on a primary unit will be automatically distributed over the CAN Bus to all downstream units to run the programme simultaneously.

Ultravap® Mistral® instruments have been designed in closely with leading laboratory liquid handling robots and is suitable for integration directly with a wide range of manufacturers' robots including:

Hamilton Robotics • Tecan • Perkin Elmer • Beckman Coulter

Ultravap® Levante®

The classic, robot-ready sample evaporator for tube racks and microplates

The Ultravap® Levante® is ideal starter evaporator for efficient concentration of samples. Porvair Sciences expertise in evaporator technologies has led to the development of the latest state-of-the-art evaporator that offers greater control and flexibility over sample preparation workflows. The standalone instrument is designed to consistently and reproducibly evaporate organic solvents from samples. Precisely engineered to ANSI/SLAS standard, the Ultravap® Levante® is designed to securely fit all microplate formats and tube racks for glass vials up to 45 mm.

Key Features

- **Reproducible Evaporation:** Advanced head technology for consistent hot gas injection in each tube and well
- **High Sample Throughput:** Choice of 12-, 24-, 48-, 96- and 384 needle heads
- **Clean Concentration:** Built to eliminate risk of cross-contamination. Ideal for sensitive samples
- **Ideal for sensitive samples:** Bulk of sample remains at ambient, only the surface is heated
- **Intuitive Design:** Slim and compact bench-friendly design with built-in LED lights for greater sample visibility



Efficient Sample Concentration

With a choice of needles heads, most common chromatography solvents can be evaporated with ease. The choice of straight or spiral needles allows the user to choose between faster dry down (spiral) and better final drying in V-well plates (straight). Spiral needles are ideal for use with square-well plates.

- Wide range of needle heads: 12-, 24-, 48-, 96- and 384-well
- Suitable for use with solvents such as dichloromethane, methanol, acetonitrile and hexane and aqueous solvents
- Consistent nitrogen gas injection for faster evaporation times
- Fits tube racks up to 45 mm in height

Flexible Programming

Combined with real-time run displays showing actual gas temperature up to 80°C, gas flow rate and stage height, the Ultravap® Levante® puts you in control of the evaporation process. With the ability to store up to 5 programmes, each programme allows up to 3 distinct ramped phases, so that a fast initial drying period can be followed by a gentler final drying phase. The built-in RS232 connection and remote command set enables the Ultravap® Levante® to be easily controlled and operated from liquid handling robots.

- Colour touch screen control panel
- Temperature management up to 80°C
- Up to 5 stored evaporation programmes
- Pause mode for real-time monitoring of evaporation

Ordering Information (Mistral® & Levante®)

Product #	Description
500149	Ultravap® Mistral® fully robot-compatible blowdown evaporator without needle head, 110/230V
500226	Ultravap® Levante® fully robot compatible Blowdown Evaporator without needle head, 110/230V
229072	96 Needle Head with spiral needles for all Porvair evaporators
229036	96 Needle Head with straight needles for all Porvair evaporators
229073	384 Needle Head with straight for Ultravap® RC. Mistral® & Levante® only
229409	24 Needle Head with straight for all Porvair evaporators
229410	Dedicated 48 Needle Head straight for use with HPLC vial adaptor for all Porvair evaporators
500193	Mistral® CAN bus interface cable with RS232 initiator and CAN terminator plugs
500194	Replacement fume extractor fan complete plug-in assy with housing
229414	12 Needle Head, 48 mm straight for all Porvair evaporators, with gasket
229415	12 Needle Head, 38 mm straight for all Porvair evaporators, with gasket
229048	Gasket for Needle Head manifold, for all Porvair evaporators
500109	Vial adaptor for 48 x 1.5 ml HPLC vials black polypropylene
229650	24-well 12 mm i.d. Vial Holder for solid aluminium, for all Porvair evaporators
229216	Disposable plastic vial rack with clear bottom for 13.75 mm o.d. glass vials

Product #	Description
500292	Ultravap® Mistral® XT150 fully robot-compatible blow down evaporator without needle head, 110/230V

Custom needle heads and holders are designed for specific requirements. Available on request.

Contact Information

EU/RoW Enquiries: int.sales@porvairsciences.com

USA Enquiries: info@jgfinneran.com



About Us

Porvair Sciences, together with Finneran Porvair and Porvair Kbiosystems are global manufacturers of consumables and instruments for life science and analytical workflows. From microplate technologies, glass vials, assay kits to automated laboratory equipment, the group is committed to equipping customers with high quality products for improved analysis and increased productivity to accelerate scientific discovery with integrity.

