

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