



The K775X - LN₂ Cooled Turbo Freeze Dryer

freeze dryer with liquid nitrogen fed cold stage

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FREEZE DYER



compact, high vacuum, low temperature



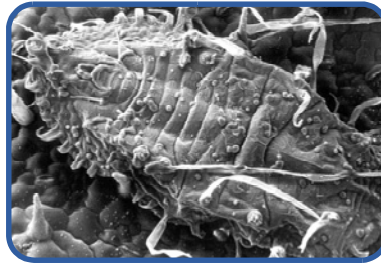
K775X freeze dryer

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The K775X Turbo Freeze Dryer can operate at temperatures down to -140°C and uses a turbomolecular pumping unit, backed by a rotary vacuum pump (order separately). Low temperatures are achieved by using a liquid nitrogen cold stage - fed from an integral vacuum dewar which is capable of giving several hours holding time between "top ups".

For extra convenience an optional "auto top-up" system - consisting of a level sensor and free standing 30 or 60 litre pressurised dewar - will allow several days unattended operation.

Pre-frozen specimens are loaded into the cooled stage of the drying chamber through the lid using a specimen transfer holder (two holders are provided - for TEM grids and for SEM stubs). The K775X has controls for time and temperature and at the end of the drying period the stage may be heated prior to specimen removal. A microprocessor controlled ten segment sequence allows ten time periods and ten temperature settings to be programmed to achieve a range of drying protocols. Up to ten different protocols can be stored for future use. The system also has facilities for purging with nitrogen gas. For extended drying periods the "auto top-up" device (see above) is recommended.



A scanning electron micrograph of an aphid, freeze dried using the K750X and sputter coated with gold. Aphids secrete wax ribbons which in this freeze dried example show good preservation, but are normally lost during drying methods involving solvents.

See: www.quorumtech.com for full technical specification and additional details.

Key Features & Benefits

- Turbomolecular pumping - for critical freeze drying applications
- Liquid nitrogen fed cold stage - temperatures below -80°C can be achieved
- Programmable multi-segment sequence control with 10 times and 10 temperatures - versatile automatic operation
- Accurate time and temperature monitoring - for pre-selection of drying cycle

Options

- "Auto top up" unit with 60 litre pressurised dewar (EK4100)
- K250 Carbon coating attachment (EK3121)
- K350 Sputter coating attachment (EK3125)

PRODUCT SPECIFICATIONS

Supplied with	Vacuum hose & connectors, moisture trap, desiccant containers & desiccant, operating manual
Work chamber	Borosilicate glass 165mm x 125mm H with polycarbonate safety shield
Weight & dimensions	450mm W x 350mm D x 175mm H. Weight:18Kg
Temperature controller & monitor	-140°C to +40°C. Display resolution to 0.1°C
Timer	0 to 999 hours
Specimen stage	-140°C to +40°C. Initial cool down to -140°C in approximately 45 mins, the final temperature can be lower
Vacuum level	1 x 10 ⁻² mbar to 1 x 10 ⁻⁶ mbar
Vacuum pumping	Turbomolecular pump - 60L/sec (ultimate vacuum: 1 x 10 ⁻⁶ mbar). A 50L/min. rotary vacuum pump for "backing" the turbomolecular pump (EK3175/E5005F) is needed.
Electrical	230V 50Hz (6A max including pump), 115V 60Hz (12A max. including pump)



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