MARKES international

L-0050 (220319-5)

THE QUEEN'S AWARDS FOR ENTERPRISE: INTERNATIONAL TRADE 2015

Kori-xr™

Specification sheet

Kori-xr aids the analysis of humid air using Markes' TD equipment, by removing water from on-line and canister samples and allowing the simultaneous analysis of ultra-volatiles, polar species, oxygenates and pinenes.

1. System features

- **Electrically cooled water-removal trap** selectively removes water from the sample stream without affecting target analytes and without extending the overall cycle time.
- **Trap heated and flushed** with carrier gas between samples to remove water collected.
- **Compatible with gas-phase samples** ranging in pressure from below atmospheric pressure to 50 psig.
- **Integrates with:** UNITY–Air Server-xr and UNITY–CIA *Advantage*-xr systems, with or without ULTRA-xr. Also compatible with UNITY 2–Air Server and UNITY 2–CIA *Advantage*.

2. System controls

2.1 Control software

- **Markes Instrument Control (MIC)**:
  - Please refer to the UNITY–Air Server-xr or UNITY–CIA *Advantage*-xr specification sheets for software features.
  - When installing Kori-xr on a UNITY 2–Air Server or UNITY 2–CIA *Advantage*, the instrument controls must be upgraded to the included MIC software.

2.2 Modes of operation for analysis

- Please refer to the UNITY–Air Server-xr or UNITY–CIA *Advantage*-xr specification sheets for desorption modes.

2.3 Water removal trap

- Constructed from quartz (3 mm i.d.).
- Trap low temperature:
  - Range: –30°C to 50°C.
  - Adjustable in 1°C increments.
  - Uniform electrical cooling applied over full length of ice deposit zone.
- Trap high temperature:
  - Range: 35°C to 425°C.
  - Adjustable in 1°C increments.
  - Uniform heating applied over full length of ice deposit zone.

2.4 Sample flow path

- Temperature range: 50°C to 210°C.
- Adjustable in 1°C increments.
- Uniform heating.
- Constructed entirely of inert materials: PTFE, quartz, inert-coated stainless steel.
- Flow capabilities: Independent, manual flow control between 25–100 mL/min.

2.5 Pneumatics

- Requires a pressurised supply of dry air or nitrogen (dewpoint below –50°C) at 50–60 psig (340–415 kPa). The dry gas is used for both pneumatic actuation of the valve and for purging the focusing trap box.

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  - Supplied with a fitting to attach to the pneumatic control accessory (U-GAS01) on UNITY-xr or UNITY 2.
- Note that helium cannot be used as the dry gas supply.

3. System specification

3.1 Dimensions and weight

- Height: 46 cm (18.1″).
- Width: 16 cm (6.3″).
- Depth: 54 cm (21.3″).
- Weight: 16 kg (35 lb).

3.2 Ambient operating conditions

- Temperature: 15°C to 30°C.
- Relative humidity: 5–95% RH (non-condensing).

3.3 Power requirements

- 100–240 V, 50/60 Hz, 650 W (Kori-xr self-adjusts to local voltage input).

3.4 Gas consumption

- Dry air or nitrogen: ~100 mL/min.

3.5 Minimum PC specification

For TD control:

- CPU: 1 GHz 64-bit dual-core or better.
- RAM: 4 GB.
- Hard disk space: 2 GB.
- Graphics card: DirectX 9 or later.
- Display: 1024 × 768 display.
- Operating system: Windows 7, 8.1 or 10, 64-bit, English.
- Other requirements: Windows-compatible keyboard and mouse; one free USB connection (in addition to those required for the UNITY-xr).

3.6 Safety and regulatory certifications

- The instrument is designed and manufactured under a quality system registered to ISO 9001.
- The instrument complies with the essential requirements of the following applicable European Directives, and carries the CE mark accordingly:
  - Low Voltage Directive 2014/35/EU.
  - EMC Directive 2014/30/EU.
  - ROHS Directive 2011/65/EU.
- The instrument conforms to the following product safety standards:
  - IEC 61010-1:2010/EN 61010-1:2010.
  - IEC 61010-2-010/EN 61010-2-010:2014.
  - IEC 61010-2-081/EN 61010-2-081:2015.
  - Canada: CSA C22.2 No.61010-1-12:2012.
  - USA: ANSI/UL 61010-1:2012.
- The instrument conforms to the following regulation on electromagnetic compatibility (EMC):
  - IEC 61326-1/EN 61326-1:2013.

For more information about our products and services, please visit www.markes.com.

Kori-xr was developed in collaboration with the National Centre for Atmospheric Science (NCAS) at the University of York. It was co-funded by the UK's innovation agency (Innovate UK), the Natural Environment Research Council (NERC) and the Welsh Government under the Knowledge Transfer Partnership program.