KORE TECHNOLOGY

Compact EI-TOF-MS

Providing rapid and sensitive gas analysis.

Mass resolution >1000 m/δm

Detection limit <50 ppb

Response time <1 second

Transportable, benchtop design

Process monitoring applications

Capillary and membrane inlet

The Kore Compact EI-TOF-MS is a modular, computer-controlled, time-of-flight mass spectrometer. This instrument is designed as a bench-top analyser and is easily transported from one location to another. It provides rapid and sensitive gas analysis for production and research applications.

Kore Technology: At the heart of innovative analysis

The Compact EI-TOF-MS's ease of operation and ability to produce stable long-term measurements of the constituents of gases at pressures from millibars to 10 bars makes the equipment well suited to process monitoring, as well as catalysis studies and reaction kinetics research.

Inlets currently included as standard:

1. A capillary inlet for rapid (<1 second) analysis of inorganic gases and high concentration VOCs; and

2. A membrane inlet for increased VOC sensitivity (down to ~50ppb) and inorganic gas detection.

The instrument can be coupled to a gas chromatograph (e.g. PREFICS) as a fast MS GC detector. For a customised instrument we have integrated a 16-port multi-position valve for process gas analysis.

EI-TOF-MS APPLICATION AREAS

Catalysis studies
Process monitoring
Reaction kinetics research
VOC monitoring
Clean room air monitoring
Breath analysis
Food/drink/odour analysis
Homeland security
Fenceline monitoring

FULL SPECIFICATION

Concentration range	From ppb levels to 100% (four sensitivity settings in software)
Maximum sensitivity	Krypton in air (1.1ppm) in 10 seconds (capillary inlet) Xenon in air (90 ppb) in 1 minute (capillary inlet) Benzene detection limit <50ppb in 10 seconds (with membrane inlet)
Mass resolution	>1000 m/δm (FWHM)
Mass range	Unlimited; in practice 1–1000 m/z (limited by gas phase thermo-chemistry)
Electron impact ion source	70eV; compatible with NIST database
Dimensions	440 x 280 x 520mm
Pumping	85 l/s turbo molecular pump, backed by a diaphragm pump
Ion source baking	Up to 100°C
Supplied with two sample inlet systems:	Capillary inlet Membrane inlet (enhanced sensitivity for VOC detection)
Response time	<1 sec (capillary inlet) ~10 seconds for benzene (membrane inlet)
Time to operation after transportation	~30 minutes
Interfacing capability with GC	

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