TORONTECH

ETHYLENE OXIDE, EPICHLOROHYDRIN RESIDUE DETECTOR

Ethylene Oxide, Epichlorohydrin Residue Detector ToronFM™ EOERD is an innovative gas chromatograph designed to detect residual levels of ethylene oxide and epichlorohydrin in medical supplies like disposable syringes and surgical gauze.

This cutting-edge instrument features a microcomputer control system, a large, intuitive display, and a streamlined design. The optimized keyboard layout enables quick operation, while premium components guarantee stability and reliability.

APPLICATIONS

I. Advanced Functionalities for Reliability and Ease of Use The instrument features power-on self-diagnosis, allowing users to quickly identify the cause and location of any failures. It includes a stopwatch function for convenient flow measurement, power failure storage and protection, and safeguards against power fluctuations and interference. Additionally, it supports network data communication and remote control. An over-temperature protection feature ensures the instrument remains undamaged, while the built-in data memory system eliminates the need for frequent resets.

II. Optimized Injection System for Enhanced Sensitivity

1. The uniquely designed injector minimizes injection bias. The dual-column compensation function addresses baseline drift caused by temperature programming while reducing background noise for improved detection limits.
2. Compatible with packed columns and capillary split/non-split injection systems, including a diaphragm cleaning feature.
3. Optional components include an automatic/manual gas six-way sampler, headspace sampler, thermo-analytical sampler, methane reformer, and automatic sampler.

III. Programmed Heating with Precise Temperature Control

1. Features an eight-step linear temperature programming system. The rear door utilizes a contactless photoelectric switch for durability and reliability. Its intelligent airflow system adjusts seamlessly to stabilize detector systems more rapidly after temperature changes, achieving near-room-temperature operation with a precision of ±0.01°C to accommodate diverse analytical requirements.

2. The column oven has a large volume with an intelligent rear door system for variable airflow, minimizing stabilization times after heating or cooling cycles. The furnace operates from ambient temperature +5°C ~ 420°C.
3. Superior insulation ensures the outer casing and top cover stay below 40°C, even when internal components reach 300°C, enhancing user safety and experimental efficiency.
4. A uniquely designed vaporization chamber minimizes dead volume. Accessories such as injection pads, liners, polarizing poles, collector poles, and nozzles can be replaced with ease. The main components, including the packed column, capillary injector, and detectors, are fully removable using a single wrench, simplifying maintenance.

IV. High-Sensitivity Detectors for Versatile Applications The instrument supports a range of high-sensitivity, high-stability detectors to meet various analytical needs:

1. Hydrogen Flame Ionization Detector (FID)
2. Thermal Conductivity Cell Detector (TCD)
3. Electron Capture Detector (ECD)
4. Flame Photometric Detector (FPD)
5. Nitrogen and Phosphorus Detector (NPD)

Each detector operates with independent temperature controls. The hydrogen flame detector, in particular, is designed for easy assembly, cleaning, and nozzle replacement, ensuring reliability and convenience.

FEATURES

1. User-Friendly Operation:

1. Fully microcomputer-controlled with button operation.
2. Equipped with a 5.7-inch (320x240) large LCD screen supports English and other language, allowing seamless language switching for users with different preferences.
3. Features an intuitive interface for easy operation and effective human-machine interaction.

2. Intelligent Hydrogen Flame Detector:

1. Automatically ignites using microcomputer control, providing enhanced intelligence and convenience.
2. Incorporates a new integrated digital electronic circuit, delivering exceptional control precision and stable, reliable performance.
3. Temperature control precision reaches up to 0.01 Â°C, ensuring accurate readings.

3. Gas Protection System:

1. Safeguards the chromatographic column, thermal conductivity pool, and electron capture detector, extending the instrument's longevity and maintaining consistent performance.

The **ToronFM™ EOERD** is designed to provide accurate, efficient, and reliable residue detection for medical instruments, ensuring safety and compliance with industry standards.

TECHNICAL SPECIFICATIONS

Model		ToronFM™ EOERD
Various injectors are available		Packed column injector, split/split capillary injector
Column oven	Temperature range	Room temperature+5~420°C
	Temperature setting	1°C; The program sets the heating rate to 0.1 degree
	Maximum heating rate	40°C/min
	Temperature stability	When the ambient temperature changes 1°C, 0.01°C
	Temperature Programming	8-order program temperature can be adjusted
Detector index Flame ionization detector (FID)	Manipulation of the temperature	400°C
	LOD	≤5x10-12 g/s (Hexadecane)

Model		ToronFM™ EOERD
Drifting	≤5x10-13 A/30 min	
Noise	≤2×10-13 A	
Dynamic linear range	≥107	
Dimension		465 x 460 x 550 mm
Mainframe weight		40 kg
Voltage		AC 220V 50Hz Max Power: 2500W (110V is also available)

TORONTECH.com

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Torontech Inc.
251 Consumers Road, Suite 1200
Toronto, Ontario, M2J 4R3, Canada

Phone: +1 416 368 2721 | Fax: +1 416 981 7652
Email: info@torontech.com

Torontech, LLC
601 Brickell Key Drive, Suite 700
Miami, FL 33131, USA

Toll-Free: 1-866-383-7919
Email: sales@torontech.com

Torontech ME FZE
Meydan Grandstand, 6th Floor,
Meydan Road, Nad Al Sheba,
Dubai-261440, UAE

Phone: +971 488 19252
Email: me@torontech.com

USA | Canada | EU | UAE | GCC | KSA | India | Africa | Latin America | Asia