



# Ethylene Oxide Analyzer

Real-Time Measurement of Ethylene Oxide



## Ethylene Oxide Analyzer

Air Quality Monitoring



**Nikira Labs**

**Fast, Accurate, Realtime Measurements of Ethylene Oxide.**



**Benchmark** Monitoring

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Air Quality Monitoring

## EtO Realtime Detection Made Simple.

Nikira Labs' Ethylene Oxide Analyzer (EOA) is a next-generation instrument for real-time, high-precision measurements of ethylene oxide. The EOA is based on Cavity-Enhanced Absorption Spectroscopy technology to measure the EtO concentration in ambient air. This proactive in-situ realtime capability simplifies the time-delayed "grab sample" process to make the EtO data insight accessible and actionable in realtime.

## Built for Flexible Fenceline Monitoring

- 22" x 9" x 5.5" (56cm x 23cm x 14cm)
- Weighs a feather-light 4 Kg / 8.8 lbs
- Built-in WiFi accessibility
- RS-232, USB-A, HDMI Ports
- Low sub-30 Watt Power Usage

## Extremely Precise, Real-time EtO Measurements

- Measurement Range: 1 ppb - 1 ppm
- Precision of < 2 ppb (1sigma, 1sec)
- Data Rate of 1 Hz

## What is Ethylene Oxide?

Ethylene oxide (EtO) is widely used in medical sterilization centers and produced in industrial chemical plants. It's primarily used as a sterilant in the commercial medical sterilizers and in the food industry. It is also an intermediate product for glycols, ethoxylates, and ethanolamines in chemical manufacturing. However, it's a key carcinogen *at very low concentrations (ppb)* if humans are exposed to it for an extended period of time.



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Measurement Technology	Cavity Enhanced Absorption Spectroscopy
Species / Precision	C2H4O: < 2 ppb (1sigma, 1sec) H2O: < 200ppm (1sigma, 1sec)
Species / Drift	C2H4O: TBD
Specie / Measurement Range	C2H4O: 1ppb – >1ppm H2O: 500 – 30,000ppm (non-condensing)
Data Rate	1 Hz
Flow Response Time	Better than 0.5 -1 Hz, 1/e
Ambient Operating Temperature Range	0-45 °C
Ambient Humidity Range	0-95% RH, non-condensing
Gas Sample Connectors	¼" Swagelok
Data Connections	Serial (RS-232)
Network Access	Built in Wi-Fi card, Ethernet (RJ-45)
Other Interfaces	USB-A / HDMI
Dimensions	22" x 9" x 5.5" (56cm x 23cm x 14cm)
Weight	4 Kg / 8.8 lbs
Power Input	14 – 36 VDC, 2.5 A
Power Consumption	< 30 W
Internal Data Storage	30 GB
Calibration	Yearly
Sample flow Rate	0.5–1 SLM
Communication Platform	Wi-Fi
Warranty	1 yr

