

F-900

Portable Ethylene Analyzer

The F-900 Portable Ethylene Analyzer non-destructively measures ethylene in real time, providing Quality Assurance professionals with the data they need to manage ethylene accurately and efficiently.

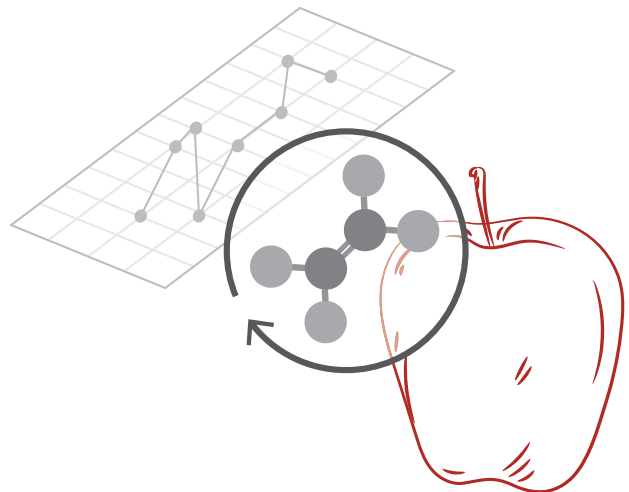
Using two electrochemical sensors, the F-900 measures ethylene from 0-200 ppm with a lower detection limit of 0.025 parts-per-million (ppm).

The patent pending “PolarCept” filter removes polar hydrocarbons from the gas stream to ensure that measurements are not polluted by interfering gases such as ethanol.

Product Features

- ▶ Real-time, continuous monitoring
- ▶ Rapid response time
- ▶ Functional across broad temperature and humidity range
- ▶ Highly sensitive C₂H₄ sensors with lower detection limit of 0.025 ppm
- ▶ Optional CO₂ sensors
- ▶ Optional O₂ sensor
- ▶ Relative humidity, temperature, and pressure sensors on-board
- ▶ Internal data logging and storage (4GB SD card)
- ▶ Wi-Fi capabilities
- ▶ Direct interface with PC or data logging systems
- ▶ Terminal block for controlling ventilation systems
- ▶ Optional Injection Port Kit for small volume static samples

**Continuous, sensitive
ethylene measurement
in real time!**



F-900 Specifications

Air sampling rate	80 ml/min
Measuring rate	1 second intervals, open or closed loop
Display	Sunlight visible transfective LCD
Operating environment	0°C - 45°C (0-90% humidity non-condensing)
Battery capacity	5 hours, rechargeable li-ion (5000 mAh)
PC interface	USB and Wi-Fi SD card
Dimensions	255 mm (L) x 210 mm (W) x 138 mm (H; includes body with legs)
Weight	2.96 kg
Enclosure	Anodized aluminum
Warm-up time	1 min (C ₂ H ₄)
C₂H₄ PPB	
Sensor type	Electrochemical
Range	0-10 ppm
Resolution	0.001 ppm
Accuracy	5% ± 0.025 ppm
Lower detection limit	0.025 ppm (25 ppb)
Offset recalibration	Weekly
Span recalibration	3 months ⁺
C₂H₄ PPM	
Sensor type	Electrochemical
Range	0-200 ppm
Resolution	0.1 ppm
Accuracy	5% ± 0.5 ppm
Lower detection limit	0.5 ppm
Offset recalibration	Weekly
Span recalibration	3 months [*]
CO₂ PPM SENSOR (OPTIONAL)	
Sensor type	Low power non-dispersive infrared gas analyzer
Range	0-2000 ppm
Resolution	0.1 ppm
Accuracy	5%
Offset recalibration	Weekly



CO₂ PPM SENSOR (CONTINUED)	
Span recalibration	6 months [*]
CO₂ PCT SENSOR (OPTIONAL)	
Sensor type	Infrared sensor, pyroelectric detector
Range	0-20%
Resolution	0.01%
Accuracy	5%
Offset recalibration	6 months
Span recalibration	6 months [*]
O₂ SENSOR (OPTIONAL)	
Sensor type	Electrochemical
Range	0-100%
Resolution	0.1%
Accuracy	5%
Offset recalibration	6 months
Span recalibration	6 months [*]

Full recalibration required annually at the manufacturer
^{*}standard gas required + typically < 5% per month

Applications

- ▶ Monitoring controlled atmosphere facilities to ensure ethylene levels do not exceed critical thresholds
- ▶ Assisting research and development efforts by providing a simple, portable platform to measure ethylene, O₂, and CO₂
- ▶ Measuring flux from a single fruit to understand how ethylene emission levels may vary across treatments
- ▶ Measuring head-space accumulation for analysis of small-volume samples or fruits with low ethylene emission rates