

# Specifications Document

## F-900 Portable Ethylene Analyzer

The F-900 Portable Ethylene Analyzer allows for continuous monitoring of ethylene in real time, non-destructively.

The F-900 measures ethylene from 0-200 ppm by using two electrochemical sensors for heightened sensitivity and a superior range. The lower detection limit of the device is 0.04 parts-per-million (ppm).

To mitigate the presence of interfering gases that may be present in the sample environment, a patent pending "PolarCept™" filter removes polar hydrocarbons from the gas stream. The "PolarCept™" filter ensures that compounds like ethanol are not falsely registered as ethylene by the electrochemical sensor.



## F-900 Applications

- ✓ **Inspecting storage facilities**  
for areas of high ethylene production or accumulation
- ✓ **Monitoring controlled atmosphere facilities**  
to ensure ethylene levels do not exceed critical thresholds
- ✓ **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

## F-900 Specifications

Air Sampling Rate	0.2 Liters/minute
Measuring Rate	1 second intervals, open or closed loop
Display	Sunlight visible transreflective LCD
Operating Environment	0°C - 45°C; 0-90% humidity non-condensing
Battery Capacity	4 hours - Rechargeable Li-Ion (5000 mAh)
Dimensions	183.5mm x 111mm x 120 mm
Weight	2.43Kg
Display	Sunlight visible transreflective LCD screen
Enclosure	Anodized aluminum
Warm-up Time	<5 minutes
Full recalibration required annually at the manufacturer	

## C<sub>2</sub>H<sub>4</sub> PPB Specifications

Sensor Type	Electrochemical
Range	0-2 ppm
Resolution	0.001 ppm
Accuracy	±10%
Lower Detection Limit	0.04 ppm
Offset Recalibration	Daily
Span Recalibration	Weekly*

## C<sub>2</sub>H<sub>4</sub> PPM Specifications

Sensor Type	Electrochemical
Range	0-200 ppm
Resolution	0.1 ppm
Accuracy	±5%
Lower Detection Limit	0.5 ppm
Offset Recalibration	Bi-annually
Span Recalibration	Bi-annually*

## Optional Sensors

### CO<sub>2</sub> PPM Sensor Specifications

Sensor Type	Low-Power Non-Dispersive Infrared Gas Analyzer
Range	0-2000 ppm
Resolution	0.1 ppmv
Accuracy	±2%
Offset Recalibration	Daily
Span Recalibration	Bi-annually

### CO<sub>2</sub> PCT Sensor Specifications

Sensor Type	Infrared Sensor, Pyroelectric detector
Range	0-20%
Resolution	0.01%
Accuracy	±1.5%

### O<sub>2</sub> Sensor Specifications

Sensor Type	Electrochemical
Range	0-100%
Resolution	0.1%

\*Standard gas required