Specifications Document

F-950 Three Gas Analyzer

To maintain optimum produce quality, the F-950 Three Gas Analyzer measures 3 critical gases: Ethylene, Carbon dioxide, and Oxygen. The F-950 measures levels of ripening and spoilage gases in the atmosphere, and can be utilized in many environments, from cold storage warehouses to transportation containers. Small volume samples from a single package can be quickly analyzed for concentrations of Ethylene, CO_2, and O_2.

Fast, Accurate & Cost-efficient Analysis

Simple to operate and weighing less than a kilogram, the F-950 measures ethylene between 0-200 ppm, with a lower detection limit of 0.5 ppm. CO_2 and O_2 concentrations are recorded with every measurement, alongside date, time, relative humidity, temperature, flow rate, and GPS location.

The F-950 is ideal for measuring ethylene production across a wide range of fruit types and is perfect for measuring ethylene emissions from fresh cut products to detect signs of advanced ripening and spoilage.

Oxygen consumption can be measured to detect anaerobic conditions in storage environments and packaged fresh-cut products. Carbon dioxide can be accurately and rapidly measured to verify that mitigation systems are effective.

Continuous Mode

Measurements live-update graphically for real-time analysis and are saved every one-second for later review.

Trigger Mode

A single measurement is recorded for all sensors when readings have stabilized.

Fixed Volume Mode

10-15 mL samples are pulled into the instrument via the Sampling Probe and analyzed for ripening gas content.

F-950 Specifications

Air Sampling Rate	80 mL/min - 500 mL/min
Measuring Rate	Open or closed loop, 1 second intervals
Display	Sunlight visible transflective LCD
Operating Environment	0° C - 45° C (0-90% humidity non-condensing)
Dimensions	18 cm x 13.5 cm x 5.5 cm
Weight	0.95 kg
Enclosure	Powder coated aluminum
Power Source	Removable rechargeable lithium-ion battery
PC Interface	USB and SD Card
Data Recorded with Each Measurement	Ethylene, CO2 and O2 Concentrations, Date, Time, RH, Temperature, GPS Location
Lower Detection Limit	0.5 ppm (500 ppb)

C_2H_4 Sensor 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*

CO_2 Sensor Specifications

Sensor Type	Electrochemical
Range	0-20%
Resolution	0.01%
Accuracy	±1.5%

O_2 Sensor Specifications

Sensor Type	Electrochemical
Range	0-100%
Resolution	0.1%
Accuracy	±1%