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ETH-1010

PRODUCT OVERVIEW

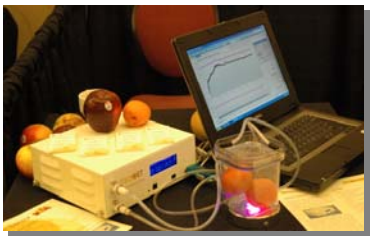
The ETH-1010 sensor provides accurate real-time measurement of ethylene gas concentrations, in a compact instrument suitable for field and laboratory use. At the core of the instrument is a proprietary sensor technology that offers extraordinary sensitivity to ethylene, at levels as low as 10 ppb in air.

Ethylene is a plant hormone produced by trees, plants, fruits, and vegetables, in response to stress, and during ripening and maturity. Measurements of ethylene gas present in the air have been used as an agricultural diagnostic tool for many decades. However, in the past, sensitive ethylene measurements were available only to expert users: primarily laboratory researchers and scientific equipment technicians. The ETH-1010 has been designed for growers, storage facility owners and operators, and researchers alike, to increase the value of their products and services.

The device also provides information on the moisture content, temperature, CO_2, and oxygen (optional), for a comprehensive measurement of the postharvest environmental conditions. This provides a new, powerful approach for making intelligent harvest and post-harvest decisions. By enabling better management of inventories, the ETH-1010 can be instrumental in improving product quality and reducing waste.

FEATURES

- Real-time, continuous measurement
- High sensitivity and selectivity
- Built in sampling pump
- User adjustable sampling rate
- Quick connections for air inlet and outlet
- Compact and portable
- Rechargeable battery for field operation
- Front panel display with alarm and status indicator
- Built-in ethernet networking and USB support
- Data logging for unattended long-term measurements
- Wireless remote sensing option



POTENTIAL APPLICATIONS

- Postharvest storage/CA room
- Refrigerated containers
- Fruit ripening room
- Single fruit ripeness indicator

- Soil ethylene sampling
- Situational awareness sensing
- General gas sensing

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TECHNICAL SPECIFICATIONS*

Dimensions	11"W x 4.5"H x 10 "D
Sensor type	Electrochemical
Weight	5 lb
Enclosure	Painted steel
Air sampling rate	500 ml/min
Sampling rate	Adjustable from 1 per minute to 1 per hour
Nominal Range	0–100 PPM (0-1000 PPM option available)
Resolution	0.010 PPM
Accuracy	± 5% of reading Automatically corrected for temperature
Power Input	120VAC, 0.1 Amps Rechargeable battery for 8-hour operation
Operating environment	5°C to 45°C (40°F to 115°F) 10-90% Relative humidity
Display	Graphical LCD with backlight
Data logging and networking	Internal storage for >10,000 data points; Support for removable USB flash drive; Optional software for offline data analysis; Networking: Ethernet, USB, and optional wireless Ethernet; Export to spreadsheet
Warm-up time	<10 minutes
Air sampling ports	Quick connects standard on inlet and outlet.

* Specifications subject to change.

Ordering Information

ETH-1010	Ethylene sensor. Includes temperature and humidity measurement, internal data storage, USB flash drive support, USB PC link, 10/100 ethernet, PC software
ETH-1010-C	Ethylene sensor with built-in CO2 measurement (optional)
ETH-1010-W	Ethylene sensor with 802.11 wireless ethernet networking (optional)
ETH-CASE	Rugged carrying case (optional)
ETH-INJECT	Syringe injection port. (Optional)
ETH-JAR	Single fruit sampling jar. (Optional)

Customization

The ETH-1010 can be customized to meet a variety of postharvest instrumentation needs. Possible enhancements include:

- Measurement of additional gases, especially *1-methylecyclopropene (1-MCP)*
- Different front panel air connections
- Special measurement ranges
- Integration with industrial automation and control systems
- Custom PC software
- Remote monitoring and control, via a secure web interface

Contact Fluid Analytics to discuss how our instruments can be tailored to fit your application.