

Ethylene Analyzer Comparison

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|-----------------------------|---|---|------------------------------------|--|---|---|
| Summary | The F-900 is the most versatile ethylene analyzer available with the ability to: measure ethylene flux directly from a single fruit non-destructively, continuously monitor storage rooms, act as an alarm, fan, or gas controller, integrate with larger control systems, measure small-volume samples with GC emulation mode, and act as a portable inspection tool. The F-900 is sensitive to low levels of ethylene, but can also be used to measure ripening applications in high-ethylene environments. The F-900 is the only device that includes a patented PolarCept water filter that removes interfering gases and hydrocarbons which would otherwise lead to an artificially elevated readings on the electrochemical sensor. To see how the F-900 Portable Ethylene Analyzer stacks up to its competitors, please view the F-900 product | | | | | |
| Specifications | F-900 | EMS MacView | EASI-1 (Absorger) | ETD-300 (Sensor Sense) | Interscan Portable Ethylene Analyzer (4000) 0-19.9 ppm range | Interscan Portable Ethylene Analyzer (4000) 0-199.9 ppm range |
| Sensor Type | Electrochemical | Electrochemical (nanogold) | Electro-catalytic | Photo acoustic | Electrochemical | Electrochemical |
| Air Sampling Rate | 200 ml/min | 180-7200 seconds per cell | | 0.25-5 L/h | Less than 1 second | Less than 1 second |
| Range | 0-2ppm + 0-200 ppm included | 0-5000 ppb or 0-500 ppm | 0.01ppm – 100 ppm; 0.1ppm – 400ppm | 0-5 ppm | 0-19.9 ppm | 0-199.9 ppm |
| Resolution | 0.001 ppm | 1 ppb (0-5000 ppb) or 0.1 ppm (0-500 ppm) | Not listed | | 0.01 ppm | 0.1 ppm |
| Accuracy | ±5% of measured value | ±0.3% | ±5% | <1% of value or 0.3 ppbv | ±2.0% of reading, ± 1 LSD | ± 2.0% of reading, ± 1 least significant digit. (Limited to accuracy of calibration standard) |
| Lower Detection Limit | 0.04 ppm (40 ppb) | Not listed | .01 ppm (10 ppb) | 0.3 ppb | 0.19 ppm | 1.9 ppm |
| Display | Sunlight visible transreflective graphic LCD | graphic with backlight | | Blue backlight LCD | LCD | LCD |
| Operating Environment | 0-45 °C (0-90% humidity, non-condensing) | -10-50°C (5-99% humidity, non-condensing) | | 10-28°C (0-95% humidity, non-condensing) | | |
| Battery Capacity | 4 hours, rechargeable Li-Ion | rechargeable Li-Ion | rechargeable | None: Power Input 90-264 VAC, 47-63 Hz | "C" size alkaline batteries; 4 weeks | "C" size alkaline batteries; 4 weeks |
| Weight | 2.43 kg | 10 kg | | | 2 kg | 2 kg |
| Dimensions | 183.5 x 111 x 120 mm | 431 x 132 x 723 mm | | 500 x 500 x 140 mm | 178 x 102 x 225 mm | 178 x 102 x 225 mm |
| Warm-up Time | <5 min | | | 30 min | | |
| Data Collection | SD card, USB, digital and analogue output from terminal block | internal database memory | USB | USB and RS232 | 1/4" phone jack for Analog recorder output connection. Typically 0-100mV. | 1/4" phone jack for Analog recorder output connection. Typically 0-100mV. |
| Optional Additional Sensors | CO2 0-2000 ppm, CO2O-20% and O2 0-100% | none | CO2 percent, O2 | none | none | none |
| Price | \$8,500 | | \$55k | | \$2,600 | |