YESAIR Incubator Verification Monitor

Critical Environment Technologies™

INDOOR AIR QUALITY MONITORS

The YESAIR Incubator Verification Monitor is a handheld gas monitor that provides a quick, easy and accurate way to monitor carbon dioxide, oxygen, temperature and RH in incubators used in biomedical research facilities, IVF facilities, laboratories, poultry facilities and other medical applications.

The YESAIR Incubator Verification monitor has two sampling probes - one for the gas(es) and one for temperature and RH. The high humidity gas sample probe is approximately 3.5 feet in length and consists of a rigid clear plastic tube, a combination of Nafion® and flexible tubing, and a dry filter between them. The Nafion tubing is used to prove more accurate readings by (a) eliminating moisture from within the tube, and (b) equalizing the relative humidity inside and outside of the tube. The remote sample probe enters through the port on the door or side of the incubator and provides a direct reading of the CO_2 (and O_2 if installed) levels inside the chamber.

The temperature / RH probe is an electrical probe that has temperature and relative humidity sensors built into the tip of the probe to sample temperature and RH to confirm the internal chamber readings. This probe connects to the mating DIN-6 connector located on the top of the device.

Includes monitor with pump, remote sampling probe to measure target gas, remote sampling probe to measure temperature and RH, calibration tubing, three "AA" NiMH rechargeable batteries, AC adapter and battery charger in a hard plastic carrying case.
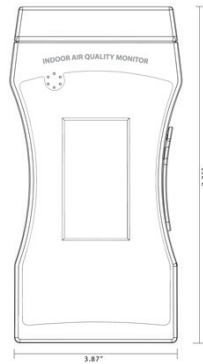
KEY FEATURES

» Stable infrared CO_2 sensor technology, available with O_2 sensor also
» Remote sample probes for easy entry into incubator port
» Large graphic LCD display with a multi-function, easy to use menu
» Light weight, contoured & comfortable to hold
» Comes with rechargeable batteries and AC adapter/charger
» Optional high capacity data logging with 2GB SD memory card and software for collecting, analyzing and graphing data
» RoHS compliant circuit boards
» CE certified

APPLICATIONS

» Hospitals
» Laboratories
» Poultry Incubators
» Infant Incubators
» IVF Facilities
» Bacteriological Incubators
» Biomedical Research Facilities
» many more...

TECHNICAL DRAWING

TECHNICAL SPECIFICATIONS

MECHANICAL

Enclosure	Rugged ABS / Polycarbonate (UL94 rated)
Weight	567 g (20 oz)
Size	197 mm x 78 mm x 98 mm 7.8 in x 3.1 in x 3.9 in
Display Display Resolution	Back-lit, multi-line LCD alphanumeric display 0.1% volume
Buttons	3 tactile push buttons for user access
Samplng Probes	High humidity gas sampling probe and a Temperature and RH sampling probe
Case (included)	Hard plastic storage/carrying case with foam lining

ELECTRICAL

Power	*Standard (included)*: 3x rechargable 3.6V NiMH batteries (8 hours continuous operation time) with plug-in battery charger / wall adapter (100 - 240 V, 50 - 60 Hz) *Optional:* Alkaline AA batteries x 3
Sampling Mode	Internal sample pump automatically draws in sample of target gas environment

YESAIR Incubator Verification Monitor

TECHNICAL SPECIFICATIONS continued

Memory	> 1 million data points data logging to SD flash card *(optional)*
Calibration	Automated through keypad
Information Recording	12 bit, multi-channel, user configurable with 2GB SD memory card slot *(Optional):* YES Logger package with 2GB SD memory card, card reader, USB cable and YES Viewer Software
Communication	Miniature USB port for changing settings and configuring logging functions
Audible	Internal 80 dB @ 4'. One set point adjustment. Audible can be switched off through menu.

ENVIRONMENTAL *(sensor dependant)*

Operating Temperature	5℃ to 50℃ (41°F to 122°F)
Humidity	0 - 99% RH non-condensing

CARBON DIOXIDE (CO_2) SENSOR SPECS

Type	Infrared
Standard Range	0 - 20% volume
Resolution	1% of measuring range for readings above 50% of range, 0.5% of measuring range for readings below 50% of range
Accuracy	± 2% of range or ± 10% of the reading up to 80% of the range and then ± 15% of the reading from 80-100% at 20℃ (68°F) ambient temperature
Long Term Drift	± 1% volume / month @ 20℃ (68°F) ambient temperature
Response Time	t_{90} = <30 seconds @ 20℃ (68°F)
Cross Sensitivities	None

OXYGEN (O_2) SENSOR SPECS

Type	Electrochemical
Standard Range	0 - 25% volume
Resolution	0.1% volume
Accuracy	No data available
Long Term Drift	< 2% change in output over 3 months
Response Time	t_{90} = < 15 seconds from 20.9% to 0%
Cross Sensitivities	CO_2: +0.1% % change in output / % CO2 @ 5% CO_2

CERTIFICATION

CE standards for safety:
I .S. EN61010-1:2001 (Ed.2)
CE standards for emissions: EN 50270:2006
CE standards for immunity: EN 50270:2006

PRODUCT CODES

1540-0009	YESAIR CO_2 (0-20% vol), comes with remote sample probes for temperature, RH & CO_2, calibration tubing, rechargeable batteries, AC adapter/charger in a hard, plastic case
1540-2009	YESAIR CO_2 (0-20% vol) and O_2 (0-25% vol), comes with remote sample probes for temperature, RH CO_2 & O_2, calibration tubing, rechargeable batteries, AC adapter/charger in a hard plastic case

ACCESSORIES

CET-8000-CKFT	Standard yellow gas flow tubing for calibration, 2 ft, 3/16" ID / 5/16" OD, priced per foot
REG-ADAPTER	Brass fitting that threads onto regulator to accommodate 15 and 17 litre cylinders
YES-AIR LGR PKG	YES Logger package with 2 GB memory card, card reader, USB cable, YES Viewer Software
1509-0021	Replacement high humidity gas sample probe
1509-0024	Replacement Temperature/RH sample probe

INDOOR AIR QUALITY MONITORS