

Model Q2 Portable O₂ / CO₂ Analyzer



Model Q2 with sample probe installed.

✓ Features

- Portable, battery operated
- Measures both O₂ and CO₂
- Built-in sampling pump
- Rugged metal enclosure
- Low maintenance design
- Long-life sensors
- Suitable for all gas mixtures
- Easy to use controls

✓ Food Applications

- Meats
- Dairy Products
- Produce
- Snack Foods
- Baked Foods
- Prepared Meals
- Coffee

✓ Other Applications

- Bioreactors
- Gas Blending Systems
- Fruit Storage Areas
- Fermentation
- Welding Gases
- Controlled Atmosphere Rooms
- Algae Experiments
- Carbon Capture And Storage
- Incubation Experiments
- Cell Culture Analysis
- Greenhouse CO₂ Research
- Biofuel Experiments
- CO₂ Mitigation Research

Overview

The Model Q2 is used for measurement of many types of modified atmosphere (MAP), or "gas-flushed" packaged foods such as meats, snack foods, fresh vegetables, nuts, fruits, dairy products and ready-to-eat packaged foods including salads. MAP packaging can be done with a single gas such as nitrogen or a mixture of gases, using some combination of nitrogen, oxygen and carbon dioxide. Regardless of the gases used, analytical testing of the package with the Q2 is valuable to determine if the concentrations are correct and whether or not the package has leaked.

Ease of Use

The Model Q2 is designed for maximum flexibility and ease of use in packaging measurements. The unit is lightweight, battery operated and can be easily moved or transported as needed. Low power consumption enables eight hours of operation before re-charging (charger included) is required.

Food Package Sampling

The syringe needle attached to the end of the probe is inserted into the package through an adhesive-backed foam septum. With the pump on, sample is drawn through the probe and tubing into the carbon dioxide and oxygen sensors, through the pump and out to vent. The sensor signals are converted to concentration values and displayed on the front panel. The probe, tubing and sensors have been designed with minimal internal volume to reduce the sample volume needed, important for small package measurements. A disposable syringe filter can be inserted on the end of the probe to remove any moisture and dirt from the sample gas.

Sampling Probe Assembly

One-piece construction to minimize internal volume and eliminate leaks. Inert tubing extends from front panel fitting through probe to needle hub. End of probe fitted with disposable filter for dirt and moisture removal. Removable needle has non-coring tip to prevent plugging.

Research Applications

For other applications, the Q2 can be fitted with a flexible plastic tube with a metal sample probe attached.

Electrochemical O₂ Sensor

Long-life, proprietary design yields accurate low-level measurements down to 0.1% oxygen and also measures full range up to 100% level. Output compensated for ambient temperature variations. Sensor is not heated and has no moving parts.

Rechargeable Battery

Long-life NiMH batteries accepts full or partial charging cycle. Charger module plugs into standard 115/240 Vac outlet for charging .

Infrared CO2 Sensor

Solid-state infrared sensor has no moving parts, sapphire optical cell, microprocessor-based calibration factors using 6th order polynomial equation to linearize full range measurement up to 100%. Low-level measurements accurate to 0.1% CO2.

Sampling Pump

Rugged miniature diaphragm pump has electronically controlled timing function to operate only when sampling. Provides high flow rate and long operating life.



Carry Case

The Model Q2 fits neatly into an optional carry case, which is custom cut for the instrument and extremely rugged.



Technical Specifications

SENSORS	Oxygen Sensor	Carbon Dioxide Sensor
Type:	Proprietary Electrochemical	Solid-state Infrared
Range:	0 to 100%	0 to 100%
Sensitivity:	0.1% O ₂	0.1% CO ₂
Minimum Detection Limit:	0.1% O ₂	0.1% CO ₂
Accuracy:	± 0.1 % O ₂ below 25% ± 1% of reading above 25%	± 0.2% CO ₂ below 30% ± 1% of reading above 30%

Calibration Controls	Potentiometer SPAN adjustment for both O ₂ and CO ₂ . Potentiometer ZERO adjustment for O ₂ , pushbutton AUTO-ZERO for CO ₂ .
O ₂ Calibration	Weekly; set with room air set to 20.9% O ₂ .
CO ₂ Calibration	Every 12 months; calibration gas recommended.
Sample Pump	Miniature diaphragm type with adjustable timing.
Sampling Assembly	Needle holder with luer needle, disposable filter, 1/16 O.D. PTFE tubing.
Size	8 x 4 x 1.8 in. (200 x 100 x 40 mm)
Weight	1 lb. (450 gms)
Warranty	2 years, parts and labor
Standards	
Consumables	For package testing applications: Sample probe assembly, luer fit needles, foam septas; filter.
Origin of Goods	Our products are manufactured in the U.S.A.
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