

OpTech[®] - O₂ Platinum

**Optical Fluorescence O₂ Analyzer
for Measuring Headspace, Dissolved Oxygen,
Oxygen Permeation and Package Leak**



OpTech
Versatile | Innovative | Easy to use

Conforms to
ASTM F2714-08

mocon[®]

OpTech-O₂ Platinum Applications

- Non-destructive shelf life analysis
- Film permeation (including perforated films)
- Package permeation
- Headspace (invasive and non-destructive)
- Dissolved Oxygen
- Total Package Oxygen (TPO)
- Gross Leak



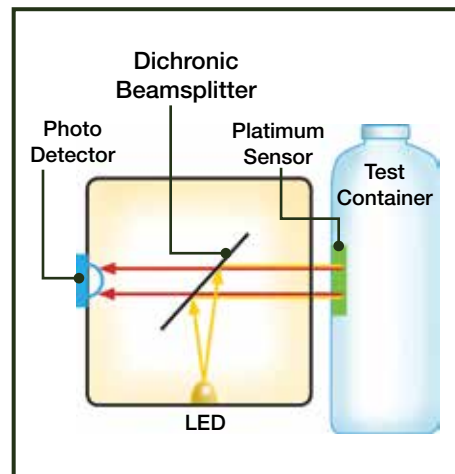
The OpTech-O₂ Platinum Advantage

- Ergonomic
- No bulky fiber optic cables
- Lightweight and portable (with Portability Kit)
- Reusable, easy to place sensors – no glues needed
- One calibration for all sensors
- No gas calibration needed
- Robust invasive needle, no headspace extraction
- Visible, non-uv light source for simple, targeted reading
- Accurate readings through colored packaging material
- ImPULSE sensor for “opaque” packaging materials
- Packaging oriented software package

MOCON'S OpTech-O₂ Platinum is the ideal multi-purpose analyzer for food, beverage, pharmaceutical and medical applications where measuring oxygen and understanding its effect on product and product shelf life is critical.

The versatile OpTech-O₂ provides accurate results, simply and effectively.

- Oxygen permeation rates of multiple packages or films
- Determine product shelf life for an oxygen sensitive product
- Perform quality control of MAP packages off the production line (including packages with very limited headspace)
- Conduct transportation and distribution studies
- Understand the effects of total package oxygen including package headspace as well as dissolved oxygen in a liquid product
- Detect packages with gross leaks
- Testing does not consume oxygen - ideal for long term oxygen studies



The OpTech-O₂ Platinum sensor can be deployed in three ways

- The platinum sensor comes ready to use in sticker format; reusable sensors for headspace applications and permanent sensors for liquid applications. These sensors are placed inside the package using MOCON'S convenient vacuum pen. The package is sealed and interrogated non-destructively with the external detector. This sensor type is ideal for package permeation studies, shelf life analysis, and distribution studies.
- ImPULSE™ platinum sensor measures oxygen inside opaque and retort packages.
- An invasive needle incorporating the platinum sensor for destructive headspace analysis.

What is Fluorescence Technology?

Fluorescent chemistries such as the platinum chemistry used in the OpTech give off light when stimulated or excited by an external light source. The degree of stimulation is inversely proportional to the amount of oxygen present. The amount of fluorescence is then read by the OpTech Detector and reported as a percentage of oxygen present in the package. Fluorescence Technology does not consume oxygen making it ideal for long term oxygen studies.

Why Platinum Chemistry?

- Increased measuring range
- Increased sensitivity
- Stable in ambient light
- Less affected by temperature changes
- Greater usable lifetime

Calibration Solved Beautifully

Trust MOCON to come up with a break-through method of simple calibration for the OpTech. Just select “Calibrate” in the software menu or read the bar code on the CalCard. Take a reading of zero and room air and you're done. It's as simple as that. No gasses needed and one calibration works for all sensors. For the OpTech needle, use the CalVial™.

MOCON OpTech-O₂ Platinum CalCard™

0% Air

The simply effective way to calibrate



* US Patent Pending





Headspace & Permeation



Limited Headspace



Retort & Opaque Packages



Dissolved Oxygen and Total Package Oxygen



Leak Detection



MAP & Quality Control



Transportation Studies



Pharmaceuticals



Produce



Medical Device



Test Multiple Samples



OpTech Advantage

Permeation



The OpTech Film Permeation Cell allows for oxygen transmission rate testing of medium barriers and high transmission rate films including real transmission rates of perforated films as used in fresh produce applications.

Head Space - Leak Detection

Use the ImPULSE sensor for retort and opaque packages and long term testing of the same package.



The adhesive sensor requires no preparation and is designed to be inserted into headspace where it is immediately available for use. Testing is conducted through the package wall. The adhesive sensor is available in permanent or reusable versions. It can be used to measure dissolved oxygen. Accurate readings through colored packaging material.



MOCON's vacuum pen enables easy placement of adhesive sensors



The needle with the sensor in the tip is designed to measure headspace gases in limited volume environments.



The portability kit with tablet computer enables users to take the detector to the sample.

SPECIFICATIONS

OpTech- O₂ PLATINUM

Detector and Base

Warm-up time	20 minutes
Detector dimensions	Width: 1.3" 3.30cm Height: 1.9" 4.83 cm Depth: 9" 22.86 cm (with needle), 6" 15.24 cm (without needle)
Base dimensions	Width: 4.8" 12.19 cm Height: 2.7" 6.8 cm Depth: 10" 25.40 cm
Measurement method	Epifluorence Confocal
Power	Standard Power USB port (2.5 watt)
Operating temperature	10-35°C
Operating humidity	0-100% non-condensing
Compliance	CE/CSA/UL
PDF report options	Through program from computer

Sensors

Adhesive and ImpULSE sensors

Application	Adhesive: Sensor is inside package ImpULSE: Sensor is external
Repeatability (Certified)	+/- 0.015% (150 ppm) O ₂ or 3% of reading, whichever is greater
Range	0.001% (10 ppm) to 25% O ₂ Permeation Mode 0.015% (150 ppm) to 25% Headspace Mode
Dissolved Oxygen Range	0.006mg/L to 10.5mg/L
Warm up time	None
Adhesion	Sensors come ready to apply
Operating temperature	5 – 40°C
Operating humidity	0-100% Sensors are designed to be immersed

Needle Sensor

Application	Sensor in needle must be 100% in volume
Repeatability (Certified)	+/- 0.015% (150 ppm) O ₂ or 2% of reading, whichever is greater
Range	0.015% (150 ppm) to 25% Headspace mode
Warm up time	None
Operating temperature	5 – 40°C
Operating humidity	0-100% non-condensing. Needle must not get wet

Computer Tablet and Case - subject to change

Dimensions (w x d x h)	5.9 x 9.21 x 0.61 in (15 x23.4x1.5cm)
Weight	Starting at 1.5 lb (0.69 kg)
Operating system	Windows® Professional 32
Ports	1 USB 2.0
Carrying Bag	9 x 2.5 x 12 in (22.86 x 6.35 x 30.48cm)

Conforms to ASTM F2714-08

Accessories

- Permeation Film Cell
- OpTech Needle
- ImpULSE External Sensor
- Reusable Internal Sensor
- Permanent Internal Sensor
- Portability Kit (computer tablet and bag)
- Bar code reader

Software features

- Unlimited number of concurrent tests
- Continuously monitor O₂ (real time)
- Graph O₂ and transmission rate versus time
- Headspace values with pass/fail limits
- Advanced calibration for wines and spirits, provides increased accuracy at different alcohol % levels
- Bar code system automatically retrieves previous sample data
- Built-in temperature and barometric pressure compensation

mocon®

7500 Mendelssohn Ave N
Minneapolis, MN 55428 USA
Phone 763.493.6370
Fax 763.493.6358
E-Mail info@mocon.com
www.mocon.com

MOCON Commitment

The OpTech O₂ Platinum is another example of MOCON's long-standing commitment to innovation and quality in the design of package testing systems for total package integrity.

Technical Support & Service

MOCON offers a variety of services designed to provide you with first class technical support. Whether you require next-day spare parts delivery, on-site training, N.I.S.T. certification or "turn-key" validation, our technical support staff can tailor a service program to fit your needs. Our goal is to provide the best in product support services.

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MOCON reserves the right to change specifications without notice as part of our continuous program of product improvement.

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