

8001^{e-net}

Oxygen Permeation Analyser



New

8001^{e-net}

combines the outstanding quality of Systech Illinois' Oxygen Permeation Analyser with a unique, online 'Remote Consultant™' capability



Applications

Barrier Film PET Bottles Containers Canisters Flexible pouches Bags

Features & Benefits

- The Remote Consultant™ guidance utility saves time and money.
- New and improved oxygen sensor enhances analytical precision.
- Integrated computer saves valuable laboratory space and compatibility considerations.
- Widest measuring range in the market providing research grade flexibility.
- Electronic flow, temperature and humidity control for ultimate responsiveness and repeatability.
- System validation with certified gas or film for speed and convenience.
- Analytical Systems Manufactured Traceable to NIST.
- No liquid coolants, catalysts or special gas mixtures required.

Conforms to: ASTM D-3985 ISO 15105-2 DIN 53380 JIS K-7126 F2622-08

Remote Consultant™

The exceptional e-net facility has a dual purpose for the user; for remote access to the analyser or to utilise Systech Illinois' Remote Consultant™ for guidance.

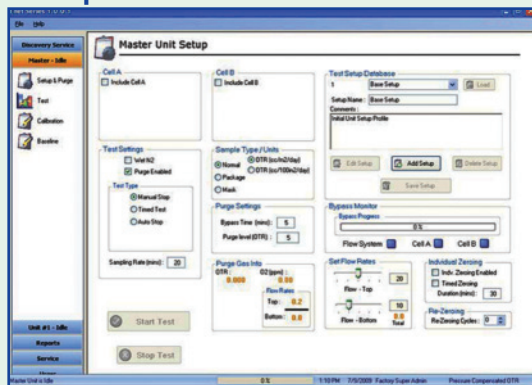
The Remote Consultant offers:

- Help and Support - Our experts can train and communicate all aspects of the analyser operation by navigating you through the intuitive menu system on screen.
- On-line instrument diagnostic - Our own Technical Engineers can run complete system diagnostics, baselines, sample tests and even calibrate your analyser assuring it remains in optimum operational condition.
- On-line operation assistance - Method development for unique samples - our Technical Engineers can make recommendations and set-up your test profiles with minimal effort and time.

Only the user can initiate connectivity with the Remote Consultant™ allowing secure remote support. Once the work session has ended, the connection is automatically closed. All these benefits are at a fraction of the cost in comparison to traditional analytical support options.

Software

Set Up



Data Graph



Report

Coulometric oxygen sensor

The analyser has a new enhanced oxygen sensor offering:

- Extremely fast purge down time.
- Accurate readings at the lowest levels enhancing analytical precision.
- The highest quality sensor in the market with the lowest replacement cost.
- Automatic Barometric Pressure Compensation.

Integrated computer

The integral computer eliminates the cost and confusion of sourcing and configuring a work station, whilst saving on valuable laboratory space.

Software

The intuitive Windows based software offers:

- Easy input and recall of operating parameters and test protocols.
- User-friendly data tracking, searches, sorts, storage and output capabilities.
- Complete system diagnostics.

Widest measuring range

The 8001 e-net analyser gives you the widest measurement range in the market providing:

- Research grade flexibility.
- Research grade accuracy and repeatability.
- Quality Assurance orientated speed and agility.
- Measurement Range ranging from 0.005 cc/m²/day to 432,000.
- Up to five Expansion Modules available to increase testing throughput.

Precision control

This analyser offers precision electronic, temperature and humidity flow control providing ultimate responsiveness and repeatability.

- Test gas and carrier gas flow is controlled by premium electronic flow controllers.
- Widest sample temperature range available - 5°C to 50°C.
- Accurate Relative Humidity range from 20% to 90% RH.
- Fastest changeover from wet to dry sample runs.
- No need for liquid coolants, catalysts or expensive gas mixtures - just simple Nitrogen and Oxygen.

Laboratory Testing Services

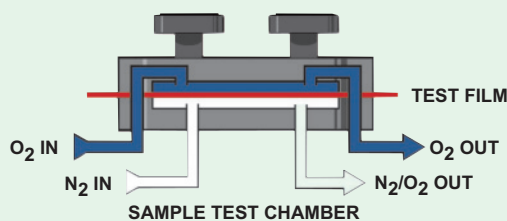
Our test laboratory will perform your Permeation Testing and Headspace Analysis. Whether you are developing innovative materials and packages or validating that your supplier is meeting specification. We can exceed your expectations with:

- Competitive Prices
- Fast Turnaround
- Independent non-biased results
- 25 Years Experience

Principle of Operation

Utilising our proprietary coulometric sensor technology to detect oxygen transmission rates samples are clamped or attached to a diffusion chamber. Pure oxygen (99.9%) is then introduced into the upper half of the chamber while an oxygen-free carrier gas flows through the lower half.

Molecules of oxygen diffusing through the sample into the lower chamber are conveyed to the sensor by the carrier gas.



This allows a direct measurement of the oxygen without using complex extrapolations. Oxygen transmission rate of the test sample is displayed as either cc/m²/day or cc/100in²/day.

8000 Series - Oxygen Permeation Analysers

Systech Illinois' range meets the requirement for the testing of any application.



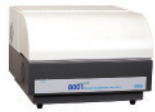
8001

533 x 533 x 305(mm) 28.1kg
2 stations for films or packages, precise humidity control, can switch between wet or dry samples within minutes.



8003

533 x 533 x 305(mm) 28.1kg
As 8001, but tests dry only.



8001 e-net

533 x 533 x 305(mm) 28.1kg
As 8001, with new coulometric oxygen sensor and an integrated computer.



8200

533 x 533 x 305(mm) 28.1kg
2 station for films or packages.



8001L

533 x 533 x 305(mm) 28.1kg
As 8001, with new coulometric oxygen sensor.



8501

356 x 356 x 279 (mm) 18.2kg
Reduced specification single station for film or package, dry test only.



8002

533 x 533 x 305(mm) 28.1kg
As 8001, but tests only dry or wet (assumed 100% RH).



8700

760 x 590 x 350 (mm) 65kg
11 stations for films or packages.

Technical Specifications

8001 8001 e-net 8001L 8002 8003 8200 8501 8700

OTR Test Range

Films

0.005 - 432,000 cc/m²/day
(0.0003 - 28,000 cc/100in²/day) No masking required

0.008 - 432,000 cc/m²/day
(0.0005 - 28,000 cc/100in²/day) No masking required

0.04 - 100,000 cc/m²/day
(0.0001 - 5,000 cc/100in²/day) No masking required

1 - 99,999 cc/m²/day
(0.07 - 6,800 cc/100in²/day) No masking required

Package

0.000025 - 1,000 cc/pack/day
0.00004 - 1,000 cc/pack/day

Test Temperature Range

5°C to 50°C (41°F to 122°F)
15°C to 40°C (59°F to 104°F)

Controlled RH Testing

Dry (0% RH) or generated RH (20% to 90%)
Dry and Unknown Wet RH (Assumed saturated or 100% RH)
Dry only

Expansion

Expandable up to 5 Modules (Total 12 test cells)
Expandable up to 5 Modules (Total 66 test cells)

Test Sample Size

Films 50cm²
Films 100cm²
Packages

Calibration

Films or NIST gas

Automatic Temperature Control

Power rating

100-240 VAC, 50/60 Hz, 840 VA (max)
100-240 VAC, 50/60 Hz, 150 VA (max)

	8001	8001 e-net	8001L	8002	8003	8200	8501	8700
0.005 - 432,000 cc/m ² /day (0.0003 - 28,000 cc/100in ² /day) No masking required		✓	✓					
0.008 - 432,000 cc/m ² /day (0.0005 - 28,000 cc/100in ² /day) No masking required	✓			✓	✓			
0.04 - 100,000 cc/m ² /day (0.0001 - 5,000 cc/100in ² /day) No masking required						✓		✓
1 - 99,999 cc/m ² /day (0.07 - 6,800 cc/100in ² /day) No masking required							✓	
0.000025 - 1,000 cc/pack/day 0.00004 - 1,000 cc/pack/day	✓	✓	✓	✓	✓	✓		✓
5°C to 50°C (41°F to 122°F) 15°C to 40°C (59°F to 104°F)	✓	✓	✓	✓	✓	ambient		ambient
Dry (0% RH) or generated RH (20% to 90%) Dry and Unknown Wet RH (Assumed saturated or 100% RH) Dry only	✓	✓	✓	✓	✓	✓	✓	✓
Expandable up to 5 Modules (Total 12 test cells) Expandable up to 5 Modules (Total 66 test cells)	✓	✓	✓	✓	✓	✓		✓
Films 50cm ² Films 100cm ² Packages	✓	✓	✓	✓	✓	✓	✓	✓
Films or NIST gas	✓	✓	✓	✓	✓	✓	✓	✓
100-240 VAC, 50/60 Hz, 840 VA (max) 100-240 VAC, 50/60 Hz, 150 VA (max)	✓	✓	✓	✓	✓	✓	✓	✓

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