

The Clear Path  
to Ensure Food Safety



**GreenLight**<sup>™</sup>  
900 SERIES

**mocon**<sup>®</sup>

Same-day bacterial analysis for meat  
and food products

# GreenLight™

900 SERIES

The importance of food and microbiological safety has resulted in demand for a rapid, high throughput method for Aerobic Plate Count (APC) / Total Viable Count (TVC) quantification to deal with the increasing number of samples that require testing.

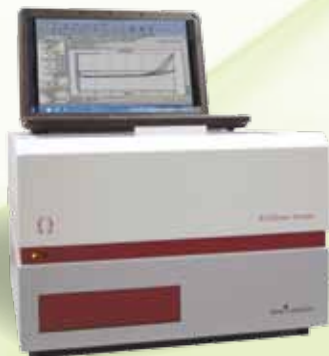


Plate Reader for Model 960

“if something is growing you'll know it, and fast!”

## Same-day bacterial analysis for meat and food products.

Ideal for companies who screen for aerobic bacteria. **The GreenLight™ 900 Series** is a break through system which measures respiration to determine the total live bacteria colony count. Unlike traditional agar or film plate methods, the **The GreenLight™ 900 Series** reduces sample preparation time, the overall cost of testing and provides same-day results (1-12 hours depending on bacterial load).

**The GreenLight™ 900 Series** models offer solutions to companies who require both high and low to medium throughput. The solutions are ideally suited for companies who screen meats and similar products.

## Test incoming raw materials, in process and finished goods with same-day results.

### Fast determination of APC/TVC levels has an immediate impact on your business:

- Increase your bottom line with faster input
- Get results in hours - not days
- Grade incoming raw materials
- Save on labor costs
- Constant monitoring of product process and plant hygiene
- Faster release of held product
- Strengthen your competitive advantage
- Research tool for spices, antimicrobials and new products
- Increase brand awareness with better quality control
- Have suppliers provide better APC/TVC results to your company

*...and this results in safer foods for consumers.*



Model 910 with 2ml APCheck™ Vial

# How does it work–

GreenLight™ sensor technology measures bacterial respiration and equates that to viable microbial load (live bacteria). *A White Paper on the technology is available.*

## It's accurate

A strong correlation is observed between GreenLight™ and the ISO:4833:2003 agar plate method for the assessment of bacterial contamination in ground beef. Pearsons Correlation Coefficient = 0.961

## Simple to operate

The GreenLight™ system does not require laboratory trained technicians to operate or analyze.

## Operators have the option of a variety of testing protocols

- Two point - pass/fail
- Multipoint mode – Gives pass/fail and semi quantitative APC (CFU/g) levels
- Continuous mode – Give pass/fail and absolute APC (CFU/g) levels

## Wide contamination range

- This system can measure aerobic bacterial respiration across a wide contamination range  $10^1$  –  $10^8$  CFU/g.

## Same day results (Including sample preparation time and incubation)

- In comparison to the conventional methods which require between 48 and 72 hours to obtain a result -The **GreenLight™ 900 series** provides a much improved “time-to-result” with  $10^3$  CFU/g detectable in 12 hours and  $10^8$  CFU/g detectable within 1 hour.

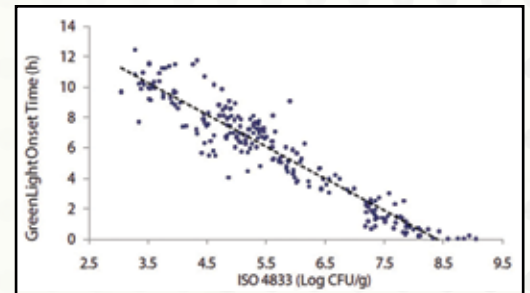
## Saves money

- Reduce preparation time with no further dilutions necessary. Reduced dilutions lower laboratory media cost.
- Lower labor costs, as minimally trained personnel can operate the instruments.
- Reduce incubator space.

## Standardizes procedures

- Results are recorded automatically within the GreenLight™ software, removing the need for difficult and tedious counting and subjective observation of colony numbers. Downloadable to Laboratory Information Management Systems (LIMS)

## Ground Beef at a Range of Microbial Contamination Levels



GreenLight™ vs. Agar Plate TVC's (ISO: 4833:2003) Correlation

CFU/g	$\geq 10^8$	$\geq 10^7$	$\geq 10^6$	$\geq 10^5$	$\geq 10^4$	$\geq 10^3$
Onset Time (H)	0-0.8	0.9-2.9	3.0-5.0	5.1-7.1	7.2-9.2	9.3-11.3

Relationship between Bacterial Load and Time-To-Result



APCheck™ vials for the Model 910 available in two volumes: 2 ml and 15 ml



96 well plate for the Model 960

## Available in two models

### GreenLight™ Model 960:

#### High throughput for meat and food products

A simple “mix and measure” assay 96 well plate system: Using food homogenates (prepared as for traditional APC testing with no further dilutions necessary) (ISO:4833:2003), sensor, sample and oil are added in sequence and resultant aerobic APC values are quantified using an appropriate calibration. The plate is measured kinetically on a fluorescence plate reader.



Plate Reader for the Model 960



### GreenLight™ Model 910:

#### Low to Medium throughput for meat and food products

The Model 910 uses the same preparation used for agar plates (no further dilution is necessary) with samples being placed in an APCheck™ vial already containing the sensor. Readings are obtained by placing the APCheck™ vial into the sample receptor cavity of the instrument and results are recorded in the GreenLight™ software.



Model 910 with a 2 ml APCheck™ vial

Each APCheck™ vial is supplied with sensor material in place and a unique bar code. The bar code ensures results are recorded against the correct sample.

### MOCON Commitment:

These systems are another example of MOCON's 40 year commitment to innovation and quality in the design of testing systems.

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

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