



Revolutionising Microbiological Quality Testing for Food and Beverage Manufacturers

Global customer markets are rapidly trending towards the rejection of artificial preservatives in food and beverage products. This presents an increasingly challenging prospect for manufacturers whose reputation depends on product integrity and safety.

Oculer Rapid 930 Series instruments provide industrial microbiology labs with a fully automated, low-cost test platform for rapid quality control.



Typical test applications include:

- Long-life dairy products such as yoghurts and cheeses
- Plant-based beverages
- Refrigerated fruit juices, iced teas and energy drinks
- Custards and prepared desserts
- Alcohol-free beer and wine





Simple

An easy-to-use system for food producers, just add the sample to a pre-prepared vial containing specifically formulated culture media, place in the reader and walk away. The reader monitors oxygen levels in each vial delivering a pass/fail microbiology result in real time. The Oculer system eliminates the need for highly skilled staff and can be used directly on the manufacturing floor.



Fast

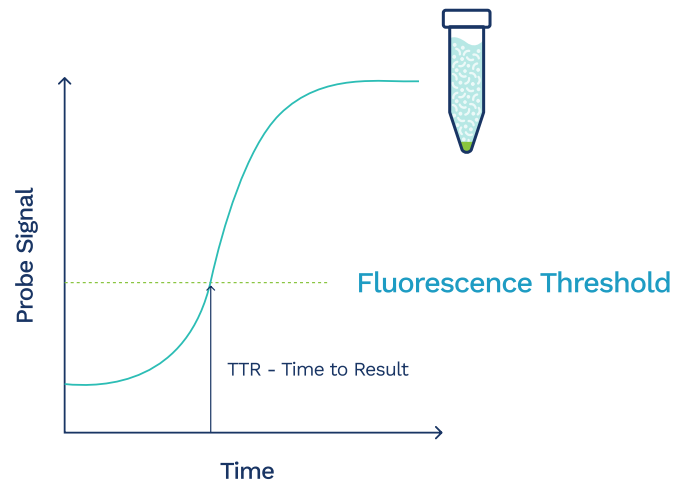
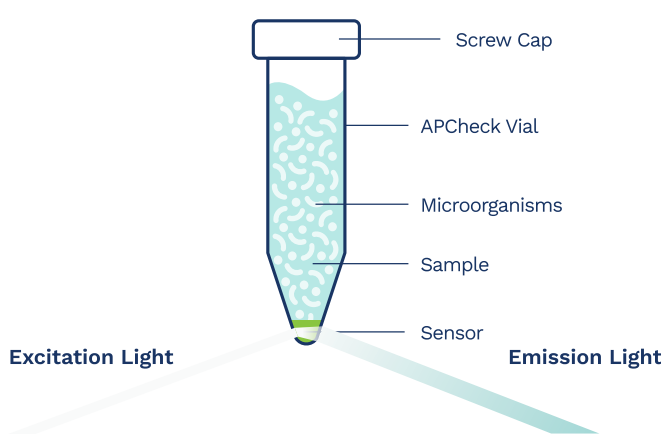
Pass results are obtained up to 72 hours faster than for traditional plates. Positive results are available in real time, allowing for immediate corrective action and reduction of production costs.



Accurate

By using bio-engineered growth media with up to 10ml of sample, the Oculer 930 can give a more accurate result compared to traditional and alternative rapid microbiological methods.

How it works



The Oculer system uses a luminescent sensor to detect oxygen depletion caused by the growth of target microorganisms in a selective medium which is specifically formulated for each application.

The limit of detection is one viable microbial cell in the test sample. Monitoring and reporting of results is performed automatically with all data analytics available centrally or remotely.

Practical solutions for customers



Yeast and Moulds



Total Bacterial Count



Commercial Sterility



Alicyclo-bacillus

- Our technology provides food and beverage manufacturers around the world the opportunity to avail of low-cost, accurate assays for contaminants.
- With the specialist Oculer validation and technical support teams you can be sure of expert advice when you need it.

Improve your cashflow and protect your brand with Oculer. Contact us today for a proof of concept discussion.



Oculer

Bringing Microbiology to Light



Rapid Positive Release of
**COMMERCIALY
STERILE PRODUCTS**

SIMPLE - FAST - ACCURATE

Rapid Positive Release of COMMERCIALLY STERILE PRODUCTS

Manufacturers of dairy and plant-based Ultra High Temperature (UHT) and Extended Shelf Life (ESL) products, can now release finished product faster with a more streamlined workflow using the Oculer Commercial Sterility Check (CS-Check) assay.

The reduced time to result leads to lower warehouse costs, plus early warning of possible spoilage problems thereby reducing waste production and enabling immediate root cause investigation.

In a fast moving, routine production facility, it is essential to have a simple to use check on commercially sterile products, one that is rapid and more accurate than traditional plates. The Oculer CS-Check assay will automatically monitor and analyse samples, detecting the presence of microorganisms in as little as 24 hours compared to 72 hours on traditional plates. Results are available in real-time leading to much faster alerts of positives.

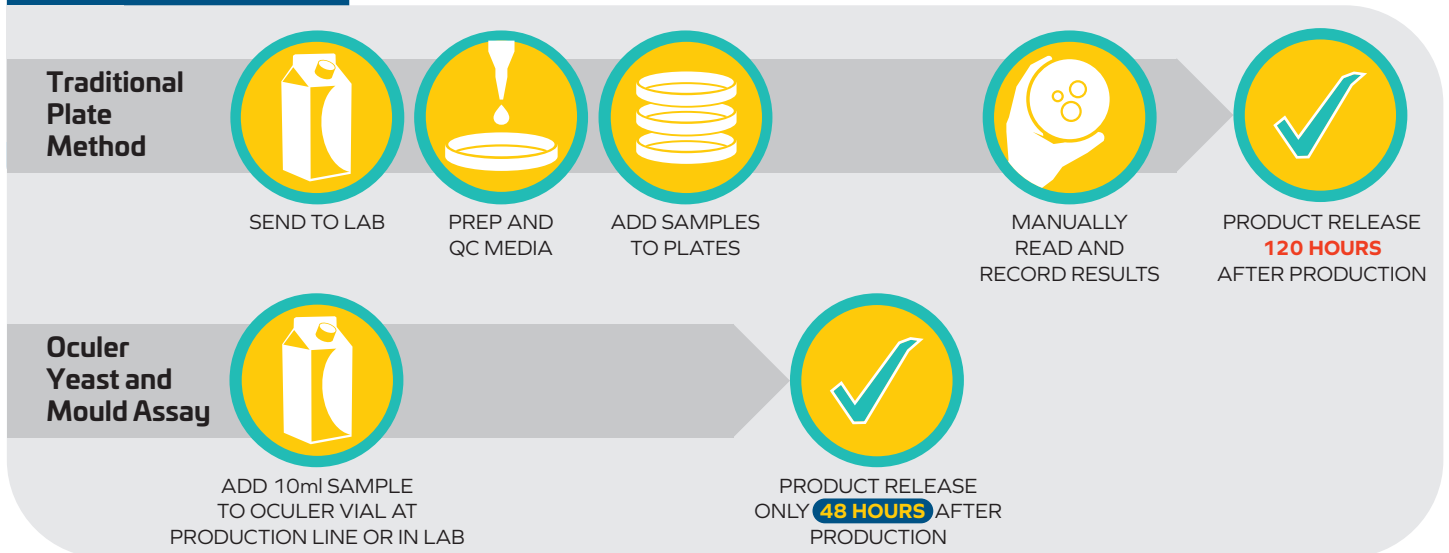
Using pre-prepared vials, stored at ambient temperature, the Oculer CS-Check assay, does not require a lab or specific microbiological expertise to achieve positive release on commercially sterile finished products.

How does it work?

The Oculer system uses a luminescent sensor to detect oxygen depletion caused by growth of yeast and moulds in a proprietary selective medium, specifically formulated for this application.



Typical workflow



Simple - Fast - Accurate

- Protect brand with positive release
- Not affected by opacity
- Same protocol for all products
- Automated alerts from multiple sites

Suitable for UHT or ESL Beverages

- Milks
- Yoghurts
- Flavoured milks
- Dairy or plant-based



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Automated
YEAST AND MOULD DETECTION
in Less Than 48 Hours

SIMPLE - FAST - ACCURATE

Automated YEAST AND MOULD DETECTION in Less Than 48 Hours

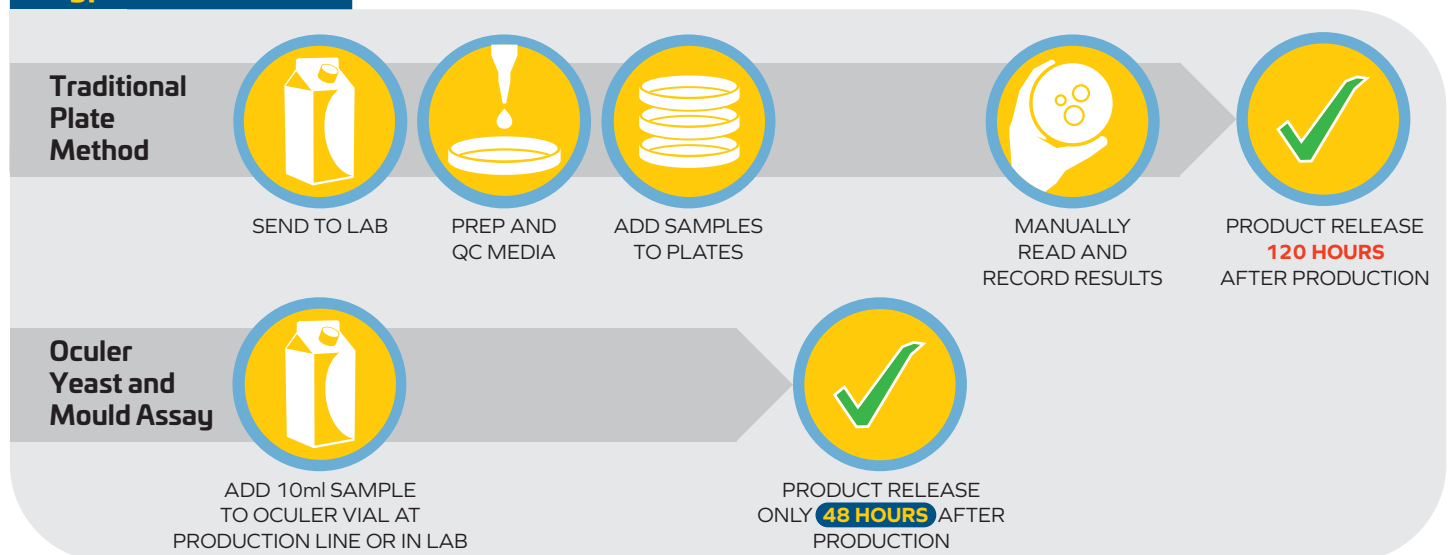
Manufacturers of fruit-containing beverages and desserts such as fruit yoghurts, smoothies, juices and flavoured milks, can now release finished product faster with the Oculer Yeast and Mould (Y+M) assay. The reduced testing time leads to lower warehousing costs, increased product shelf life; early warning of spoilage problems can reduce product wastage. Ideally suited to a fast moving, routine production facility, the Oculer Y+M assay will automatically monitor and analyse samples, detecting yeast and moulds in as little as 48 hours compared to 120 hours on traditional plates. Results are available in real-time leading to much faster notification of positives. Using pre-prepared vials of media stored at ambient temperature, the Oculer system does not require a lab or specific microbiological expertise.

How does it work?

The Oculer system uses a luminescent sensor to detect oxygen depletion caused by growth of yeast and moulds in a proprietary selective medium, specifically formulated for this application.



Typical workflow



Simple - Fast - Accurate

- Not affected by pulp or opacity
- Same protocol for all products
- Automated alerts from multiple sites
- Protect your brand with positive release

Suitable for Fruit-Containing Beverages and Desserts including:

- Yoghurts
- Smoothies
- Juices and concentrates
- Flavoured Milks
- Dairy or Plant Based

Oculer EM-Check® Surface Contamination Test

OC-ENV-06 Microbial Detection Kit



The Oculer EM-Check Surface Microbial Detection Kit is an all-inclusive, ready-to-use kit which simplifies and quickens the process of environmental surface testing for biological contamination. The kit uses Oculer's Rapid 930 Series Technology for the automated detection of microbial activity on cleanroom surfaces using a design that reduces the likelihood of sample cross-contamination and mishandling of samples by the operator.

The OC-ENV-02 kit is intended to be used with the Oculer 930 Series automated reader. The reader's internal LED sends light to the polymer sensor located in the kit vial. The optical system detects the decay of the fluorescence signal emission, which correlates to the oxygen depletion over time due to the respiration of microorganisms in the sample. The system is flexible and allows either enumeration produced from an internal calibration, or a pass/fail test based on presence/absence of oxygen depletion over time. The instrument software allows continuous measurements of oxygen depletion within the reader or endpoint measurements from externally incubated samples.

The OC-ENV-02 kit with Oculer's dedicated reader offers:

- A traditional, growth-based method with enhanced sensitivity due to the oxygen sensing technology
- Non-destructive testing allows further analysis or speciation by traditional methods
- Suitability for Class A/ISO 5 classified areas and lower
- An ideal way to sample the most critical and hard-to-reach points identified by risk assessment
- High recovery of surface microbial contaminants using certified flocked swabs
- Faster time-to-result by using an oxygen-sensitive probe assay
- Automated sample analysis eliminating human reading subjectivity
- Up to 24 samples can be automatically processed per carousel

BENEFITS

Time-to-Result

- Achieve results typically within 24 hours
- Increase sensitivity by maximising recovery
- Advanced test tracking and reliability

Cost Saving

- Easier disposal than agar plates
- No extra costs and risks due to reagent dispensing
- Reduces risks of false positives in aseptic production areas and related investigations

Test Ready

- Fully prepared and disposable
- Minimizes operator handling
- Eliminates unintended contamination

Reduced Operator Handling

- Decreases time-consuming and operator-dependent manipulations
- Simplified standard operating procedures
- Faster sampling steps
- Easy lift-out interchangeable carousel

FEATURES

- Standard TSB culture media
- FLOQSwab™ flocked swab with SRK™ for highest recovery swabbing (>70% each lot).
- Reduced variability on results
- Eliminate cleaning validation studies for culture media residues required for contact plate method
- Compact design and low maintenance reader
- Integrated incubator
- Intuitive screen monitor
- Easy-to-read dashboard with tabular graphics
- Result as Presence/Absence or as colony forming units (CFU)
- Secure results and 21 CFR part 11 and EU GMP Annex 11 compliance
- Compatible with Microsoft Windows 10®

APPLICATIONS

- Microbiological surface sampling in cleanrooms and associated controlled environments
- Microbiological monitoring of equipment, operator clothing and gloves
- Easy monitoring of critical point in RABS and isolators

Bringing Microbiology to Light

Ocüler EM-Check® Surface Contamination Test

OC-ENV-06 Microbial Detection Kit - SPECIFICATIONS



Surface Detection Kit

| | | |
|-----------------------|---|--|
| Materials | Each individual gamma irradiated peel pouch kit contains: - EM-Check® Vial: polypropylene vial with integrated platinum porphyrin polymer and 10 ml of TSB - FLOQSwab: flocked swab in polypropylene tube with sponge and 1ml of Surface Rinse Kit™ (SRK) | |
| Dimensions | EM-Check® Vial - 15 ml capacity vial: - 120 mm length including red stopper - 17 mm diameter | Swab tube: - 175 mm total length including green stopper - 12 mm external diameter |
| Filling Volume | 10 ml | |
| Media | Tryptic Soy Broth (TSB) | |
| Additives | Neutralizers included in the SRK buffer | |
| Packaging Option | Two bags containing five kits each are triple-bagged together, 20 of the triple-bagged units are placed inside a fourth plastic bag to produce a final package containing a total of 200 vial kits. | |
| Storage Temperature | 5 °C - 25 °C (41 °F to 77 °F) | |
| Approximate Detection | 10 ⁰ to 10 ⁸ cells | |

Ocüler Rapid 930 Series Automated Reader

| | | | |
|---------------------------------|---|------------------------|--|
| Model | Model 930-15 uses 15 ml capacity vials or adapters | Operating Temperature | 18 °C to 24 °C (64.4 °F to 75.2 °F) |
| Test capacity | 24 vials | Storage Temperature | 10 °C to 35 °C (50 °F to 95 °F) |
| Throughput | Up to 216 tests in pass/fail mode | Relative Humidity | 0 - 95% non-condensing |
| Power (adaptor supplied) | 100-240 VAC, 50-60 Hz Output 72 W max | Dimensions (H x W x D) | 31.8 x 30.50 x 38.14 cm (12.52 x 12.01 x 15.02 in) |
| USB ports | 1 USB peripheral port 1 external Barcode Reader port | Weight | 12.30 kg (27.12 lbs) |
| Internal Incubation Temperature | Ambient 2 °C to 40 °C (35.6 °F to 104 °F) | Accessories | Laptop computer (pre-loaded with Ocüler software), extra carousel (24 places), external Barcode Reader |
| Language | Manageable by end-user | | |

The OCUSwab™ vial uses Ocüler Rapid 930 Series® Technology; Rapid 930 Series® is a registered trademark of Ocüler Ltd. FLOQSwab™ and Surface Rinse Kit™ (SRK) are trademarks of COPAN Diagnostics Inc. Windows 10® is a registered trademark of Microsoft Inc. All other trademarks are the property of their respective company. Ocüler Ltd reserves the right to change specifications without notice. © 2022 Ocüler Limited. All rights reserved.



INSULAB



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Automated Yeast and Mould Detection in less than 48 hours

Manufacturers with Yeast and Mould concerns can now release finished product faster with the Oculer Yeast and Mould (Y&M) assay.

Oculer's proprietary selective medium encourages the growth of yeast and mould while suppressing the growth of bacteria, even in live yoghurt.

The reduced testing time leads to lower warehousing costs and increased product shelf life as early warning of spoilage problems can reduce product wastage. Ideally suited to a fast moving, routine production facility.

FAST

Commercial sterility pass result within 48 hours after pre-incubation

SENSITIVE

A larger sample size (10mm) is up to 100x more sensitive than plates

FULLY AUTOMATED

Reduce manual errors; collect real-time data without the need for highly skilled staff

EASY TO USE

One step sample inoculation into ready-prepared vials, can be done by any operative

FLEXIBLE

Not affected by sample matrix, same protocol can be used for airy or plant-based beverages

COST EFFECTIVE

Releasing product faster lowers warehousing costs and maximises shelf life



How it works

The Oculer Y&M assay will automatically monitor and analyse samples, detecting yeast and moulds within hours, with a confirmed negative result for a 10 ml sample within 48 hours compared to 120 hours on traditional plates. The 10 ml sample size gives a minimum tenfold increase in sensitivity over traditional methods.

Results are available in real-time, often leading to much faster notification of positives. The Oculer Rapid 930 Series system

uses dedicated APCheck® vials that are pre-filled with bioengineered media, gamma-irradiated to guarantee sterility, and which are validated to be stored for extended periods at ambient temperature. The Oculer system does not require a lab or specific microbiological expertise. APCheck® vials are delivered following rigorous quality assurance tests, removing the need for on-site media production and associated quality control.

Typical Applications for Yeast & Mould Assay



UHT dairy and plant based products



Fresh and pasteurised fruit juices



Alcohol-free beers and wines



Yoghurt and cream

2x

Faster than plates

100%

More sensitive

100%

Eliminate media preparation

216

Assays per instrument

Simple - Fast - Accurate

- Protected brand with positive release
- Not affected opacity
- Same protocol for all products
- Automated alerts from multiple sites

Suitable for UHT or ESL Beverages

- Milks
- Yoghurts
- Flavoured milks
- Dairy or plant-based

Improve your cashflow and protect your brand with Oculer. Contact us today for a proof of concept discussion.



INSULAB

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Rapid Positive Release of Commercially Sterile Products

The Oculer CS-Check® is an automated commercial sterility testing system for a wide range of products including Dairy, Non-Dairy and carbonated beverages.

The reduced time to result leads to lower warehouse costs, plus early warning of possible spoilage problems thereby reducing waste production and enabling immediate root cause investigation. In a fast moving, routine production facility, it is essential to have a simple-to-use check on commercially sterile products, one that is rapid and more accurate than traditional plates.

FAST

Commercial sterility pass result within 48 hours after pre-incubation

SENSITIVE

A larger sample size (10mm) is up to 100x more sensitive than plates

FULLY AUTOMATED

Reduce manual errors; collect real-time data without the need for highly skilled staff

EASY TO USE

One step sample inoculation into ready-prepared vials, can be done by any operative

FLEXIBLE

Not affected by sample matrix, same protocol can be used for dairy or plant-based beverages

COST EFFECTIVE

Releasing product faster lowers warehousing costs and maximises shelf life



How it works

The Oculer CS-Check assay will automatically monitor and analyse samples, detecting the presence of microorganisms within minutes, with a confirmed negative result in 48 hours. Results are available in real-time leading to much faster alerts of positives. Unlike ATP and flow cytometry tests, the Oculer system utilises a 10 ml sample volume which enables the system to detect bacteria and yeast & moulds down to a single organism. This represents a breakthrough

enhancement in sensitivity by several orders of magnitude. The presence of bacteria, yeasts and moulds is accomplished in a single test.

Using gamma-irradiated, pre-prepared vials, stored at ambient temperature, the Oculer CS-Check® assay, does not require a lab or specific microbiological expertise to achieve positive release on commercially sterile finished products.

100%

More sensitive

50%

Faster than agar

97%

Independently
validated inclusivity

30m

For early results



Simple



Fast



Accurate

- Protected brand with positive release
- Not affected opacity
- Same protocol for all products
- Automated alerts from multiple sites

Suitable for UHT or ESL Beverages

- Milks
- Yoghurts
- Flavoured milks
- Dairy or plant-based



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