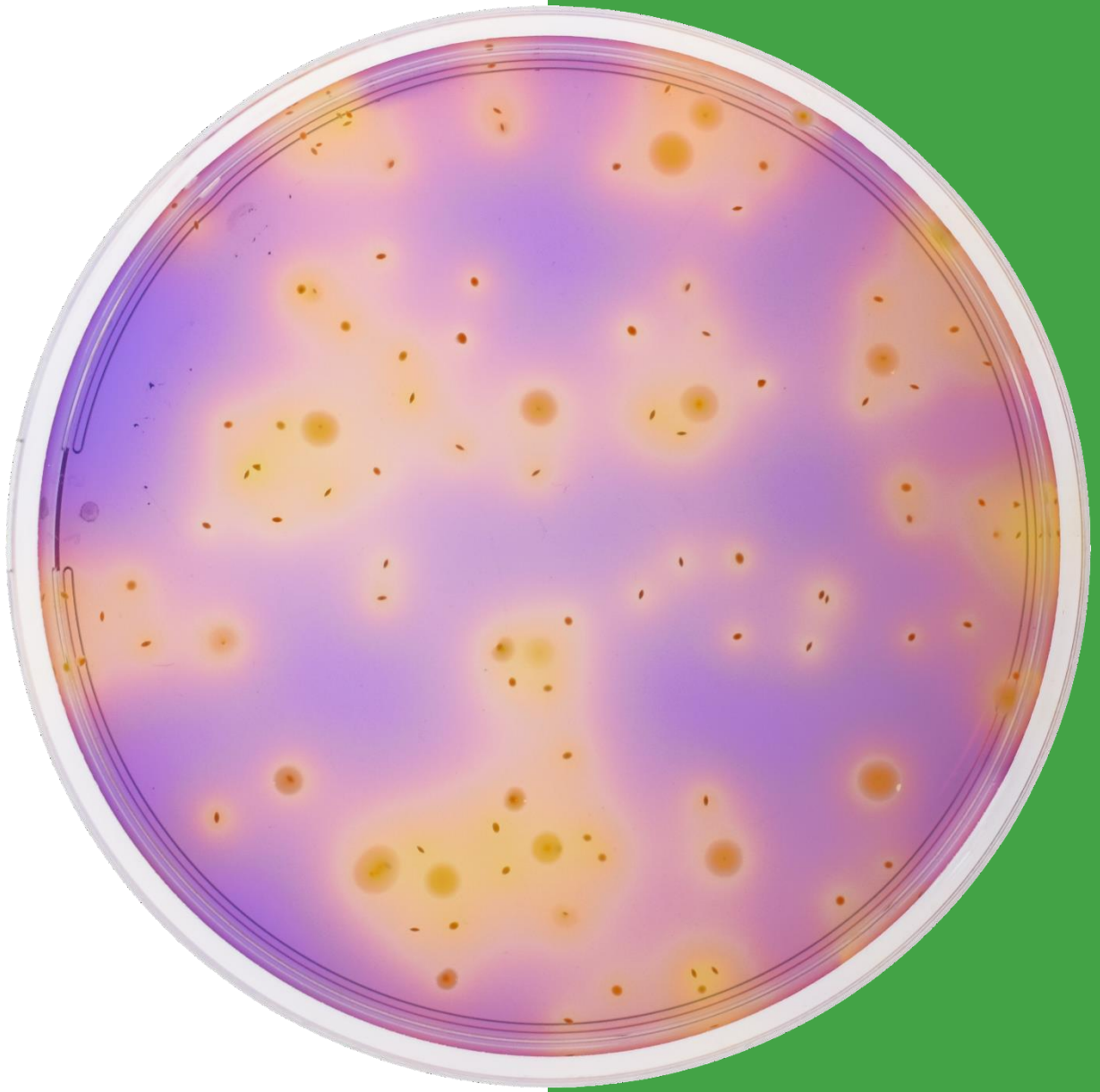
NEOGEN®

One Plate

The One Plate Solution

One Plate is the only quality indicator method that’s validated for enumeration using a single test for all food types* instead of mandatory duplicates as required by ISO 7218.

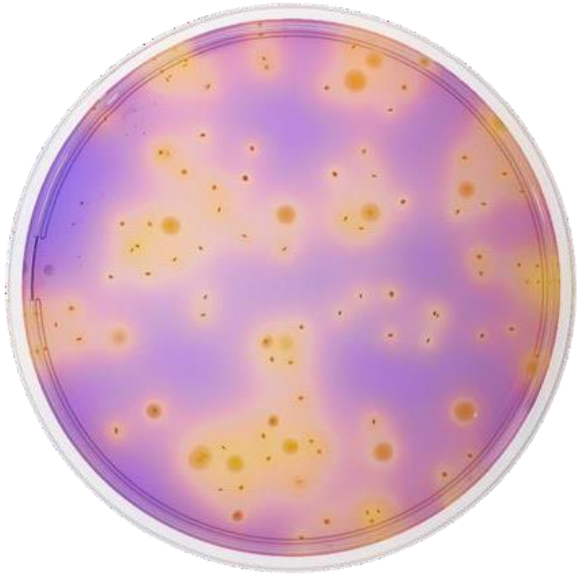


* Validation studies performed on a broad range of foods.

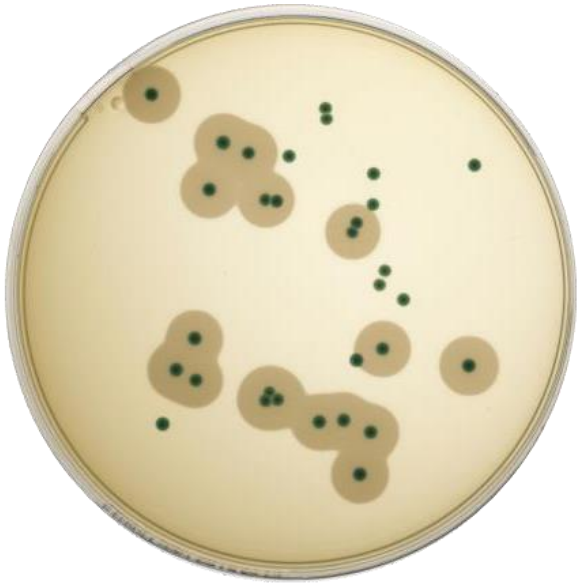
The Power of One

One Plate
Yeast and Mould
MicroVal 2021LR99

One Plate
Total Viable Count
MicroVal 2022LR112



One Plate
Enterobacteriaceae
MicroVal 2022LR108

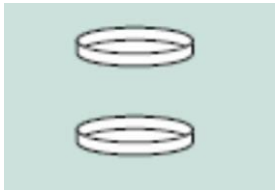


One Plate
Listeria monocytogenes & spp
MicroVal 2019LR89

The Power of One

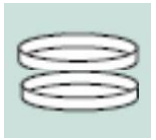
Pour Plate Techniques According to ISO 7218

2 successive dilutions



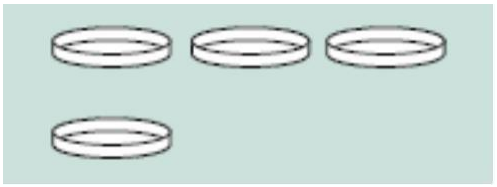
or

duplicates



Spread Plate Techniques According to ISO 7218

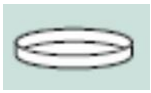
2 successive dilutions



or

duplicates

One Plate*

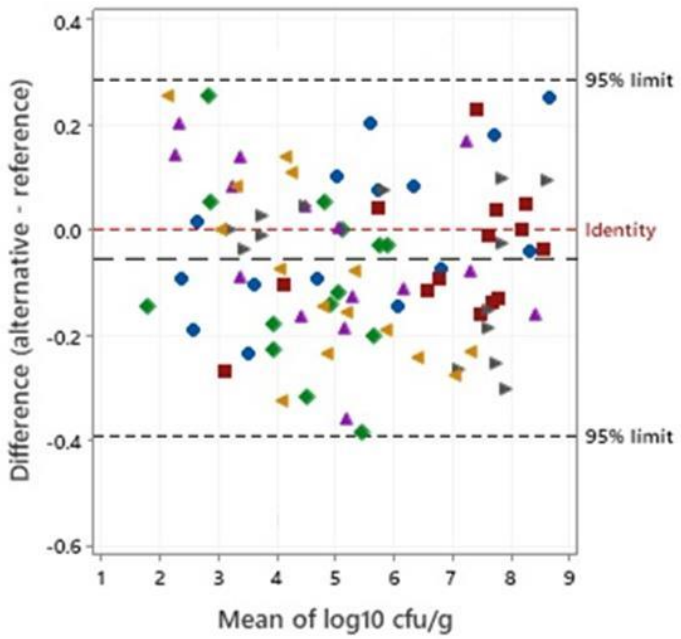


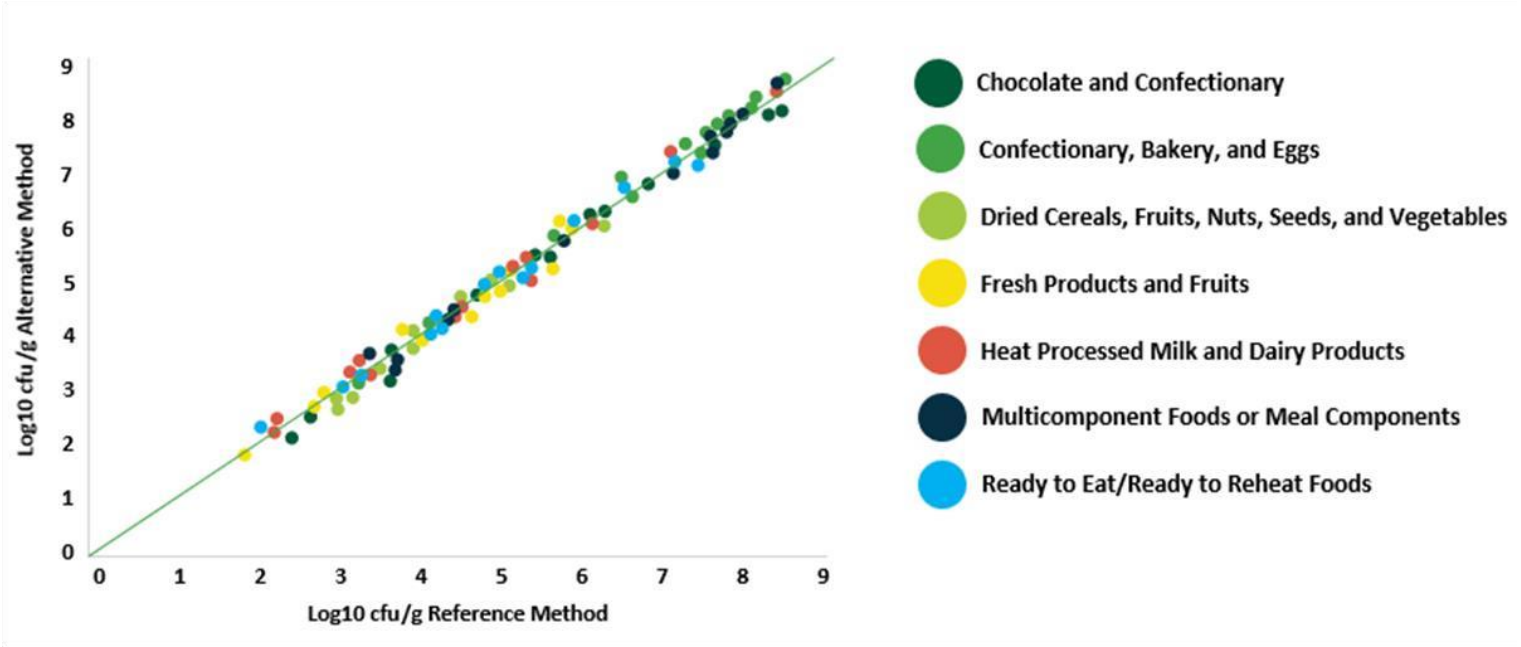
*Pour plate - 1 mL
Spread plate - 0.1 mL
Spiral plating - 0.1mL (equivalent to 4 dilutions)

NEOGEN

One Plate is validated per ISO 16140-2:2016.

One Plate Yeast and Mould Validation





One Plate is validated as per ISO 16140-2:2016

One Plate	Standard Method	Format	Categories	Bias	SD
Yeast and Mould	ISO 21527-1:2008 ISO 21527-2:2008	Spread (Surface) & Pour Plate	• Milk and dairy products • Fresh produce and fruits • Multi component foods or meal components • Confectionery bakery and eggs • RTE/RTRH meats • Dried cereals fruits nuts seeds and vegetables • Chocolate, and confectionary	-0.03 Log	0.12 to 0.16 Log
Total Viable Count	ISO 4833-1:2013 ISO 4833-2:2013	Spread (Surface) & Pour Plate	• Pasteurised dairy products • Fishery products • Combined category: raw and RTC • Produce and fruits (combined category fresh and processed) • Multi-component foods or meal components • Raw and Ready to cook RTC Meat and poultry	-0.08 Log	0.23 Log
Enterobacteriaceae	ISO 21528-2:2017	Pour Plate	• Milk and dairy products • Fresh produce and fruits • Multi component foods or meal components • Raw and Ready to cook RTC Meat and poultry • RTE/RTRH meats	0.05 Log	0.23 Log
Listeria monocytogenes & spp.	ISO 11290-2:2017	Spread (Surface) & Pour Plate	• Milk and dairy products • Fresh produce and fruits • Multi component foods or meal components • Raw and Ready to cook RTC Meat and poultry • RTE/RTRH meats	-0.13 to 0.15 Log	0.15 to 0.44 Log

Excellent results: all bias < ± 0.2 Log and standard deviation <0.5Log

A strong foundation fosters innovation.

Neogen invests in classical microbiology.

250+

Dehydrated Culture Media Formulations

Less hands-on test time. Same or faster TTR.

One Plate lets you do so **much more with less**, giving you greater efficiencies and greater confidence. With less labour, comes more cost savings.

Less media
to prepare to accommodate the same sample volume.

Flexibility
allowing pour plating or surface plating

Less plating time
means you can process samples **faster**.

Fewer plates
take up **less** space in the incubator.

Added diagnostic features
allow for **easier** interpretation.

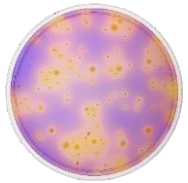
Upgrade your lab routine in record time.

One Plate Yeast and Mould vs. DRBC/DG18 per ISO 21527-1 and ISO 21527-2 (all aW)

- 54 hours
- 120 hours

One Plate Total Viable Count vs. PCA per ISO 4833-1:2013

- 36 hours
- 72 hours



One Plate *Enterobacteriaceae* vs. VRBGA per ISO 21528-2:2017

- 18 to 24 hours
- 18 to 24 hours — 48 hours to confirm positives

One Plate *Listeria monocytogenes & spp* vs. Agar Listeria acc. Ottaviani & Agosti per ISO 11290-2:2017

- 46-50 hours *
- 46-50 hours — 48 hours to confirm positives

* Confirmation test not required if the presence of *Listeria monocytogenes* or *Listeria spp.* has already been confirmed in the sample.

One Plate

Reference Method

Gain efficiency with the **same** or **faster** time-to-result (TTR).

NEOGEN

One Plate Yeast and Mould

One Plate Yeast and Mould Formats (OP YM)

Dehydrated Culture Media

Pack Size	Cat. No.
500 g	NCM1017A
5 kg	NCM1017B
10 kg	NCM1017C
25 kg	NCM1017D

Supplement

Pack Size	Cat. No.
1 x 100 mL bottle (for up to 50 L media)	NCM4088-50

High
Water Activity Level

DRBC Agar
per ISO 21527 1:2008







OP YM: One plate. One test. All food types.*

Low
Water Activity Level

DG18 Agar
per ISO 21527 2:2008





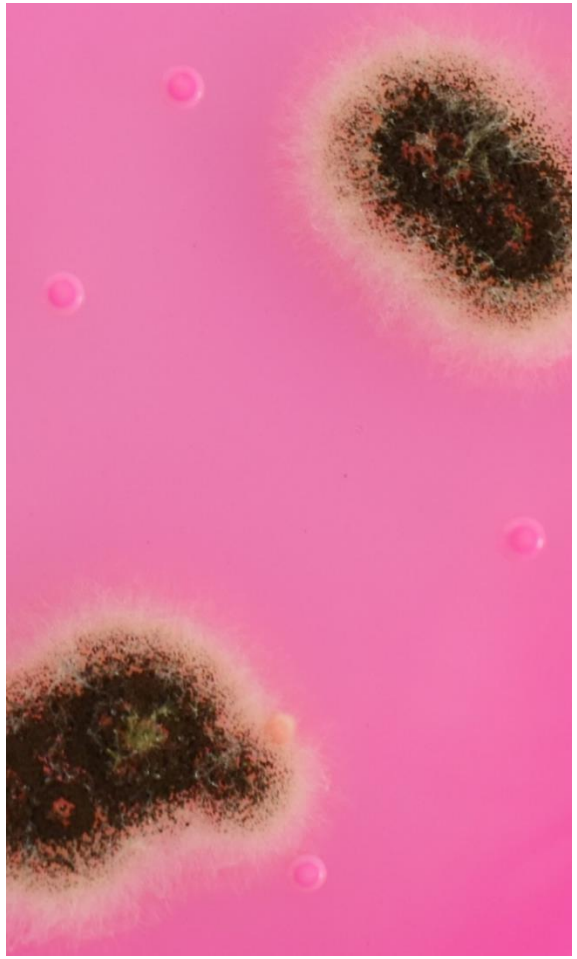


* Validation studies performed on a broad range of foods.

The answer's right there in living colour.

ISO *Reference Method DRBC/DG18*

- DRBC contains Rose Bengal dye, which stains yeast pink on a pink background, giving relatively poor differentiation.
- DG18 contains no diagnostic feature; thus, all yeast present as natural cream/buff colour.



One Plate YM

- Colour indicator for easier yeast counting – metabolically active yeast pick up stain and will be various shades of purple.
- Addition of liquid liquid-ready, post-sterilization supplement (NCM4088) permits easier counting.

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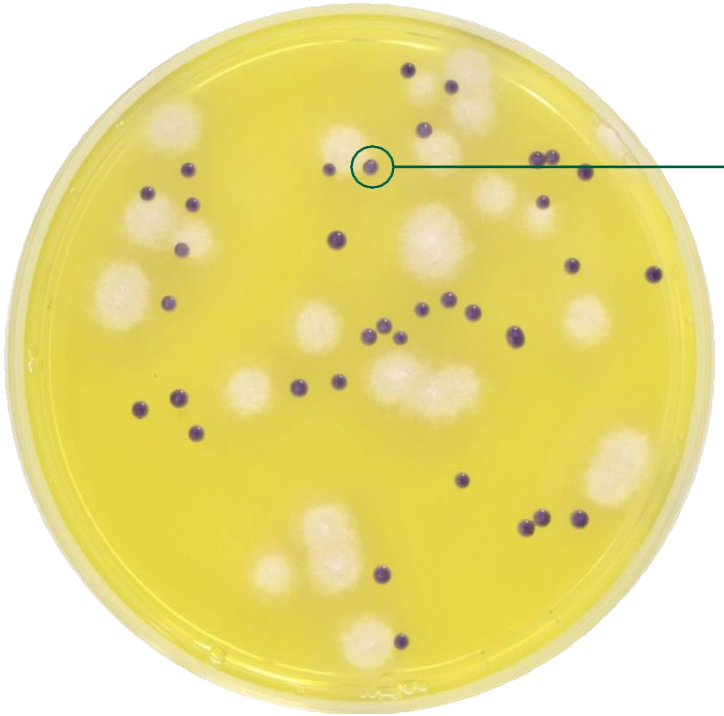
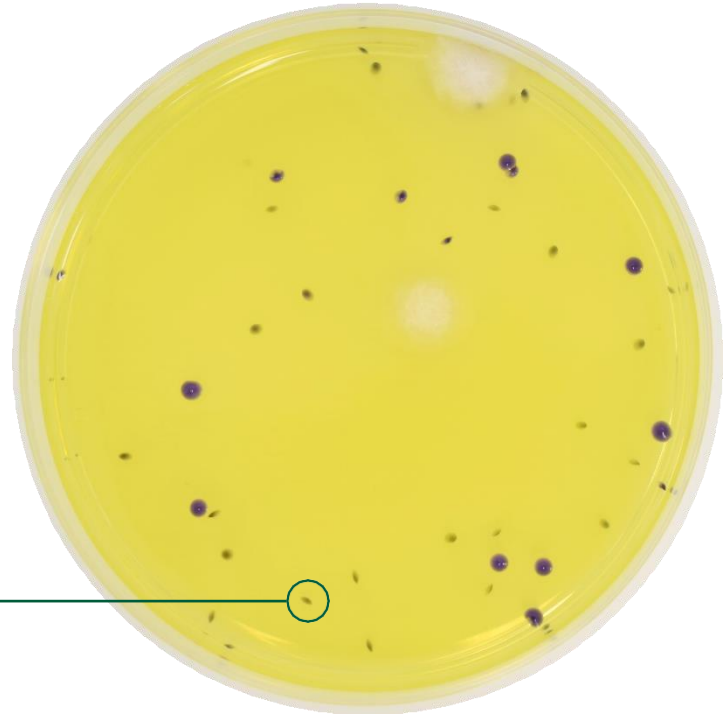
One Plate YM: Spread and Pour Plates



All colonies grow on the surface, and due to the diagnostic stain, yeast are easily distinguishable from mould (as well as morphology).

Pour plate colonies are the same colour and typical appearance but grow at different levels throughout the agar.



0.1 ml spread plate*

1.0 ml pour plate

***Spiral plating possible**

One Plate Yeast and Mould Advantages

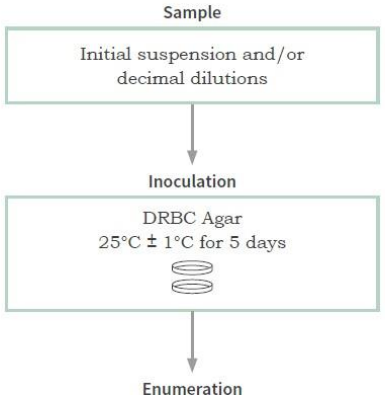
- One plate required instead of mandatory duplicates as per ISO 7218
- All water activities (aW) so no need to select different media (DRBC/DG18)
- 54 hours time to result (up to 72 hours for convenience) vs 120 hours with ISO
- Yeast take up purple stain making it easier to count against the yellow background

One Plate Yeast and Mould vs. DRBC/DG18 per ISO 21527 (all parts)

Yeast & Mould Workflows

ISO 21527-1:2008

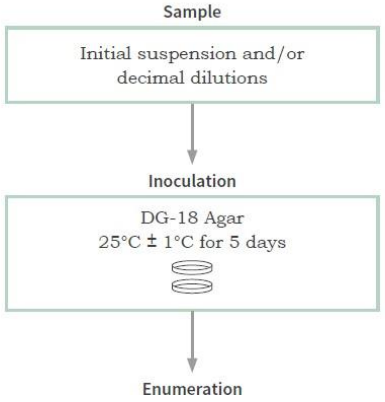
Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds — Part 1: Colony count technique in products with water activity greater than 0.95.



- Spread plate only
- 4 plates for low numbers -1mL

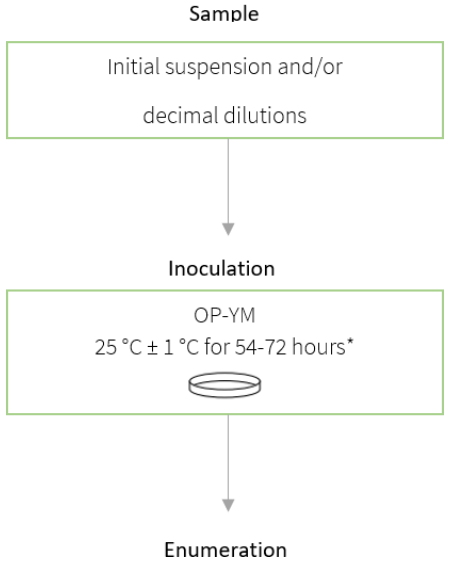
ISO 21527-2:2008

Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds — Part 2: Colony count technique in products with water activity less than or equal to 0.95.



- Pour plate - 1 mL
- Spread plate - 0.1 mL
- Spiral plating - 0.1mL (equivalent to 4 dilutions)

MicroVal 2021LR99

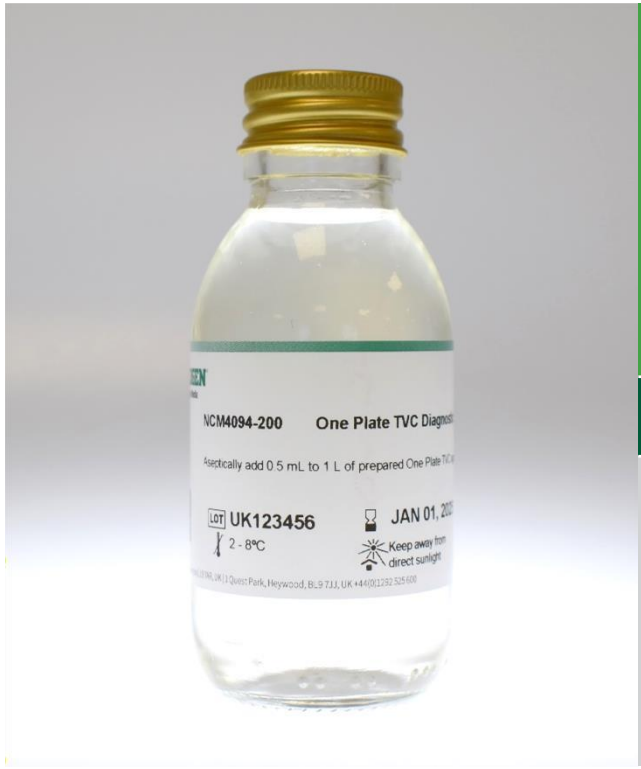


One Plate Total Viable Count

One Plate TVC Formats

Dehydrated Culture Media

Pack Size	Cat. No.
500 g	NCM1018A
5 kg	NCM1018B
10 kg	NCM1018C
25 kg	NCM1018D



Supplement

Pack Size	Cat. No.
1 x 100 mL bottle (for up to 200 L media)	NCM4093-200

One Plate TVC: Clearly the better choice.

ISO *Reference Method PCA*

- Plate Count Agar (PCA) has no diagnostic features: all microorganisms present as natural colour/no differential.

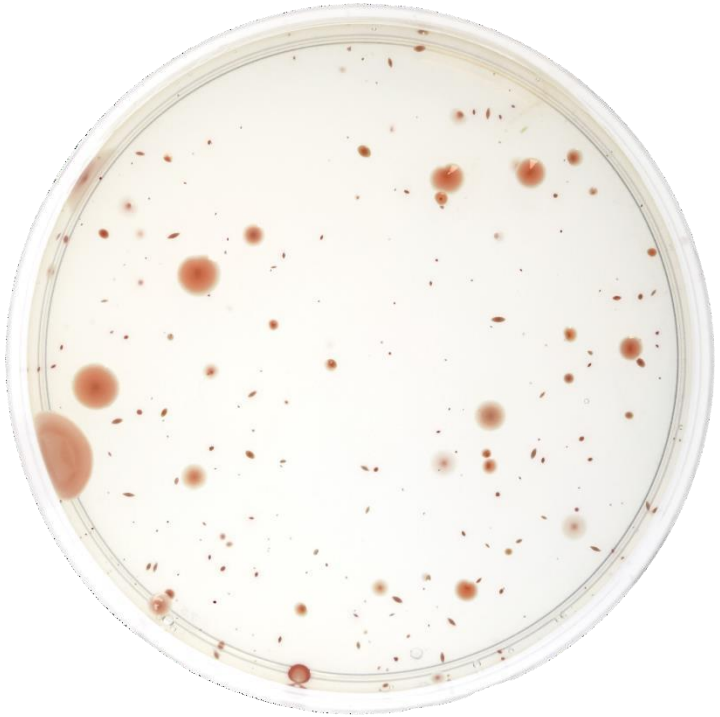
One Plate TVC

Colour indicator for easier counting – metabolically active microorganisms pick up stain and will be pink-red.

- Addition of liquid-ready, post-sterilization supplement (NCM4094-200) permits easier counting.
- Colour indicator is designed to improve visibility and counting. All colonies (regardless of colour) should be counted for expression of result.

One Plate TVC: Spread and Pour Plates

0.1 ml spread plate*



1.0 ml pour plate

*Spiral plating possible

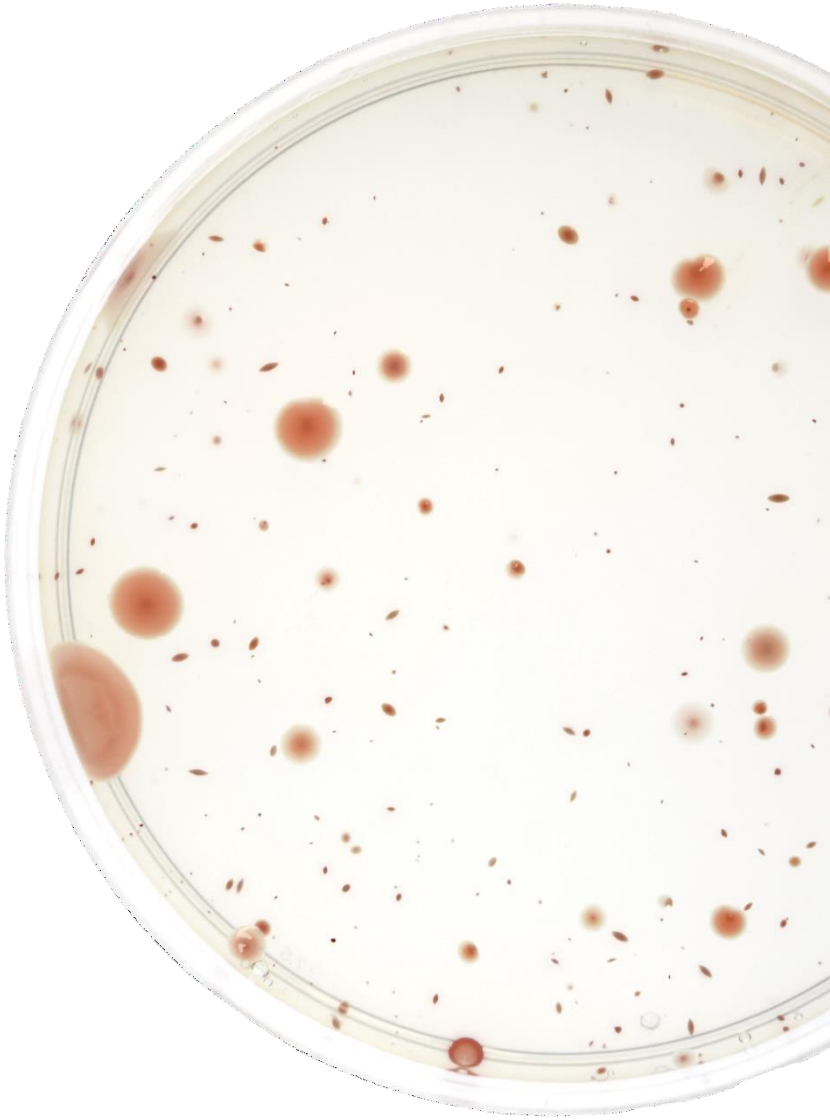
One Plate TVC: Spiral plating

- **Automated spreading**
  - Modern automatic spiral platers can deposit accurate volumes of liquid sample in an Archimedes spiral onto the surface of a rotating agar plate
  - Logarithmic deposition deposits decreasing amounts of sample as it moves away from the centre.
  - Therefore the volume of sample deposited onto a given area of a plate is known
- **Easy enumeration**
  - Specific sections of a plate can be counted to enumerate the whole plate allowing for enumeration of a large range of CFU counts that would otherwise be too numerous to count

Reduce serial dilutions: 4 dilution in One plate

One Plate TVC Advantages

- One plate required instead of mandatory duplicates as per ISO 7218
- 36 hours time to result (up to 48 hours for convenience) vs 72 hours with ISO
- Colour indicator stains colonies pink-red to improve counting ability

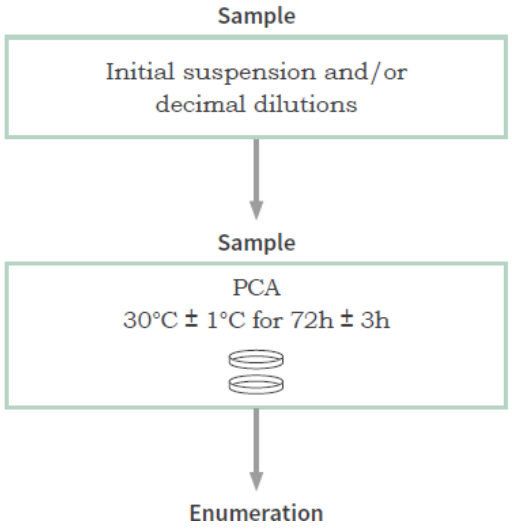


One Plate Total Viable Count vs. PCA per ISO 4833 (all parts)

TVC Workflows

ISO 4833-1:2013

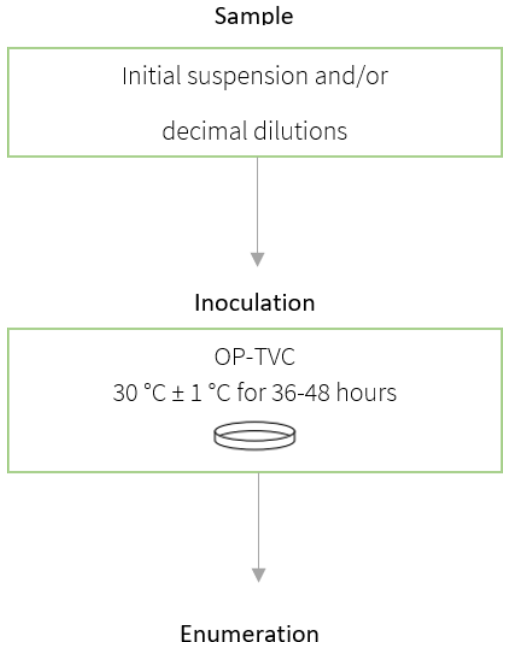
Microbiology of the food chain — Horizontal method for the enumeration of microorganisms — Part 1: Colony count at 30°C by the pour plate technique.



- Pour plate only in the EU regulation
- Spread plating accepted in the UK regulation

MicroVal 2022LR112

OP-TVC FLOW DIAGRAM



- Pour plate - 1 mL
- Spread plate - 0.1 mL
- Spiral plating - 0.1mL (equivalent to 4 dilutions)

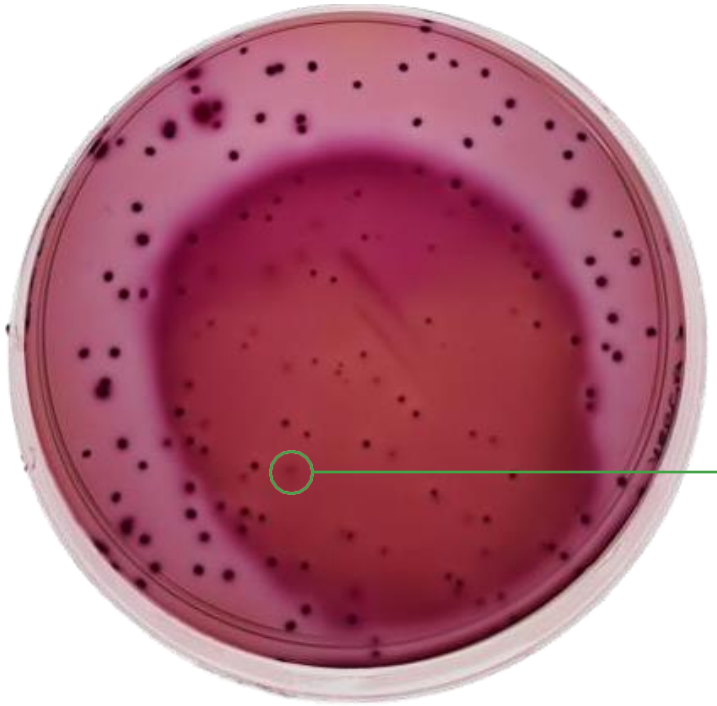
One Plate *Enterobacteriaceae*

One Plate *Enterobacteriaceae* (EBAC)

Dehydrated Culture Media

Pack Size	Cat. No.
500 g	NCM1019A
5 kg	NCM1019B
10 kg	NCM1019C
25 kg	NCM1019D

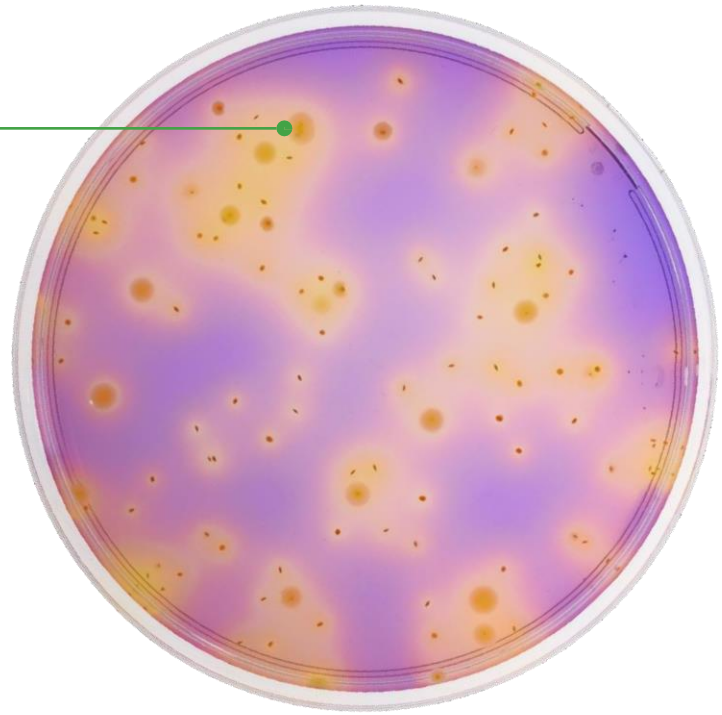
One Plate EBAC: Clearly superior.



The Violet Red spectrum is harder to see because the uncontrolled acid/bile reaction hinders counting.

VRBGA per ISO 21528:2017 (all parts)

The colour spectrum differential via indicator dye: yellow colonies (± halo) on a purple background are easier to see.



OP EBAC

One Plate EBAC: One and done.

VRBGA per ISO 21528:2017 (all parts)

Inoculate or Pour

Add Overlay

2 Steps

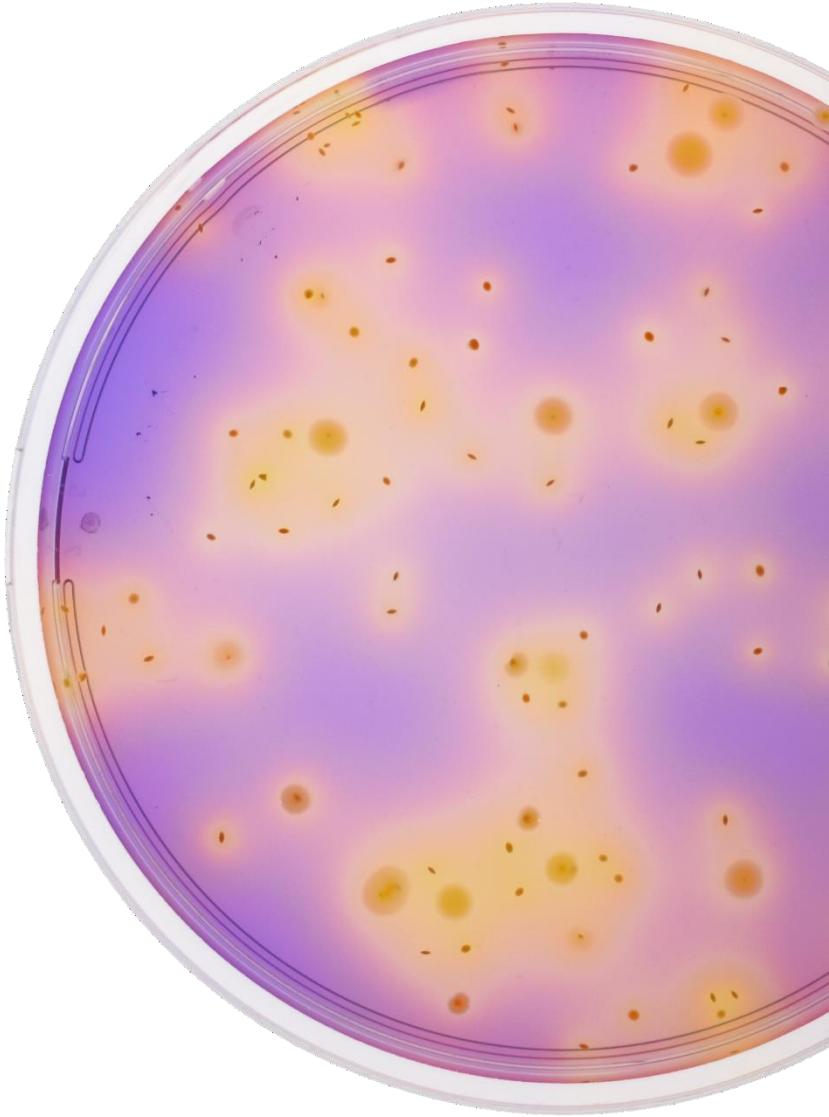
One Plate EBAC

Inoculate or Pour

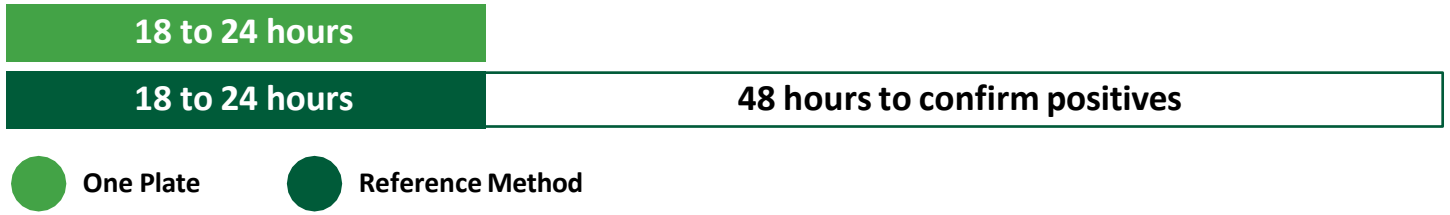
1 Step

One Plate EBAC Advantages

- One plate required instead of mandatory duplicates as per ISO 7218
- No overlays required meaning you save media and increase efficiency
- Same time to result as standard (18-24 hours)
- Improved colour palette for better reading i.e., yellow colonies on a purple background
- Reduced physical artifacts (e.g., smudging acid reaction) compared to VRBGA for easier reading
- No additional confirmation



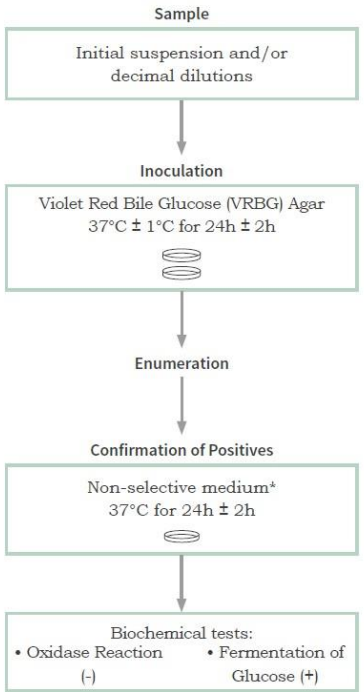
One Plate *Enterobacteriaceae* vs. VRBGA per ISO 21528:2017 (all parts)



Enterobacteriaceae Workflows

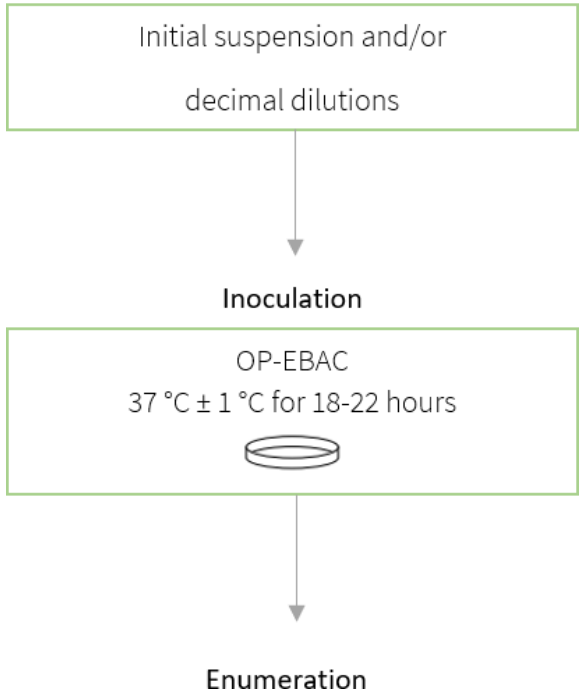
ISO 21528-2:2017

Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of Enterobacteriaceae — Part 2: Colony-count method.



- Pour plate - 1 mL

OP-EBAC FLOW DIAGRAM



- Pour plate - 1 mL
- No confirmation

One Plate *Listeria monocytogenes and Listeria* spp.

One Plate *L. monocytogenes* & spp.

Dehydrated and Ready to Use Culture Media

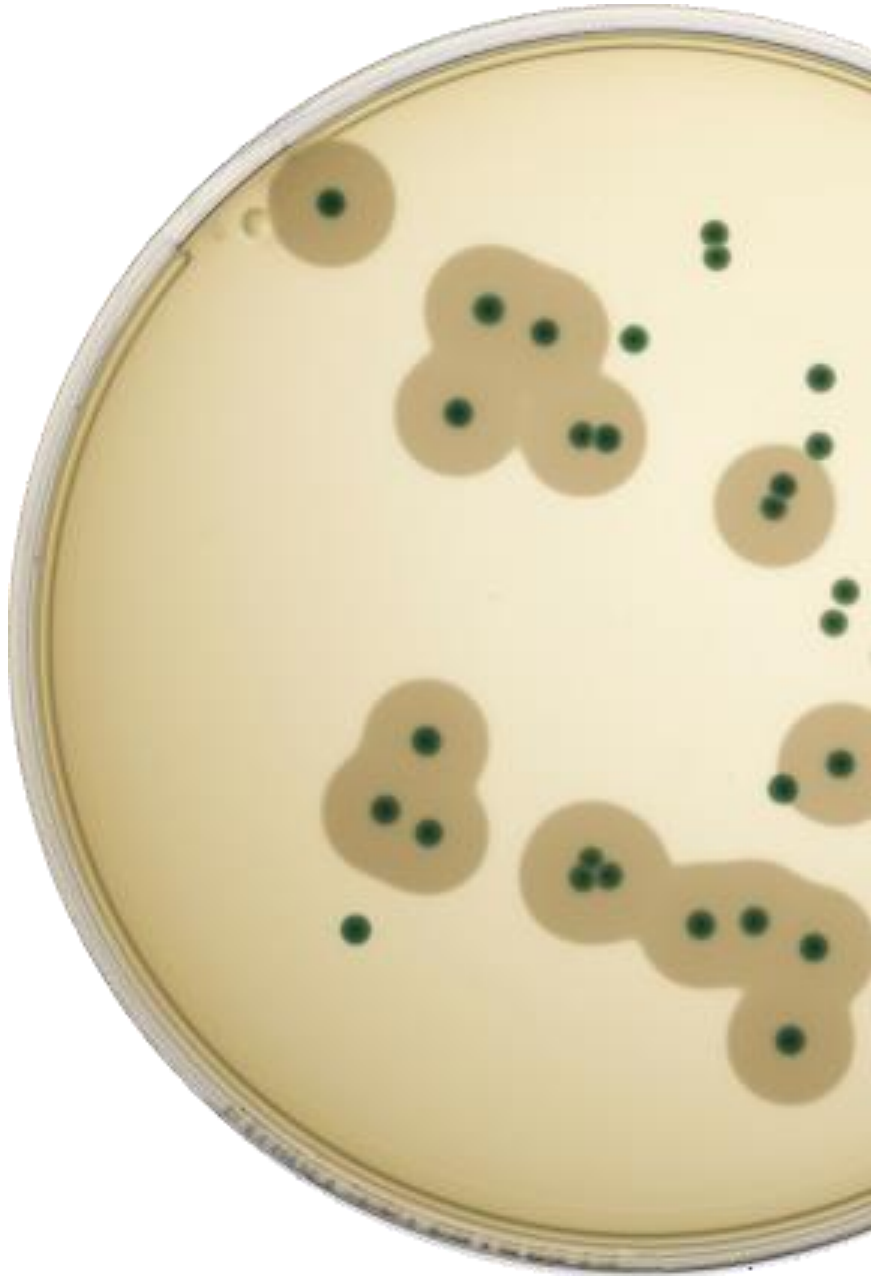
Pack Size	Cat. No.
500 g	NCM1004A
5 kg	NCM1004B
10 kg	NCM1004C
Pre-poured plates 90 mm x 100	NCM3000-100

Supplement

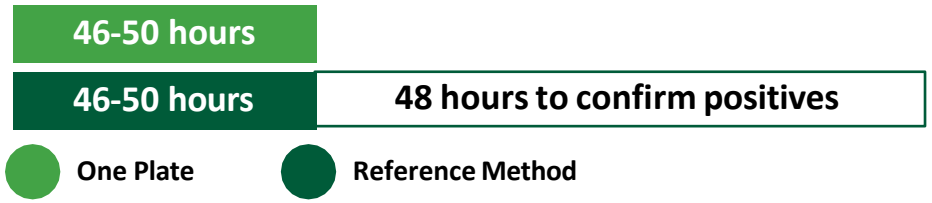
Pack Size	Cat. No.
10 vials (2 x Vials needed per 1L media)	NCM4001
10 vials (2 x Vials needed per 1L media)	NCM4002

One Plate *L. monocytogenes* & spp. Advantages

- No Overlays
- No Duplicates
- Choice of Spiral, Pour and Spread Plating
- Confirmation not required if the presence of Listeria monocytogenes or Listeria spp. has already been confirmed in the sample
- Same plate as the OBOP-L detection method



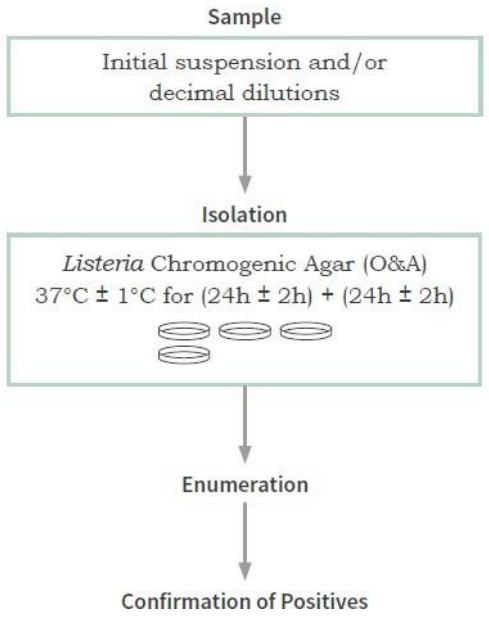
One Plate *Listeria monocytogenes & spp.* vs. Agar Listeria acc. Ottaviani & Agosti per ISO 11290-2:2017



Listeria monocytogenes and *Listeria* spp. Workflows

ISO 11290-2:2017

Microbiology of the food chain — Horizontal method for the detection and enumeration of *Listeria monocytogenes* and of *Listeria* spp. — Part 2: Enumeration method.

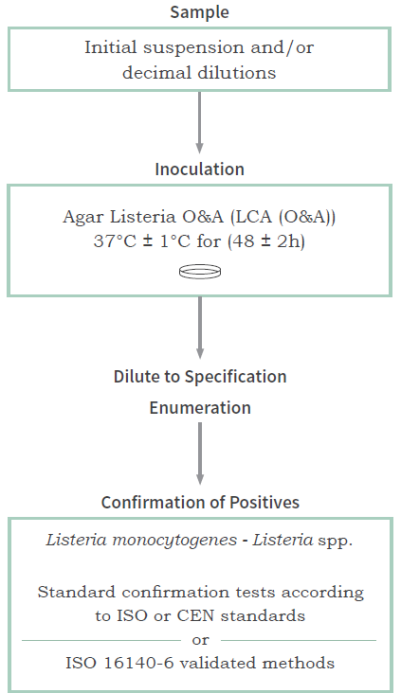


- Spread plate only
- 4 plates for low numbers -1mL

One Plate for *Listeria*

MicroVal Validation Certification 201 91R89

A rapid test for the fully quantitative enumeration of *Listeria* spp. and *Listeria monocytogenes*



- Pour plate - 1 mL
- Spread plate - 0.1 mL
- Spiral plating - 0.1mL (equivalent to 4 dilutions)

Thank you for listening

Get in touch

www.NEOGEN.com

