

Food testing

Validated detection and identification of *Salmonella* species in 2 days

Thermo Scientific Salmonella Precis Method

Reinventing the standard for culture-based Salmonella testing

Salmonellosis remains one of the most common forms of food poisoning, caused by the ingestion of foods contaminated with bacteria of the genus *Salmonella*.

Traditional culture-based methods for detecting *Salmonella* are time consuming, taking up to 4 to 5 days to complete, and require large numbers of sample manipulations and identification steps.

The Thermo Scientific™ Salmonella Precis™ Method is the next generation in rapid, culture-based testing and offers a quick and easy method for the enrichment, detection and confirmation of

Salmonella species from food, animal feed, and environmental samples.

The simplified workflow has been expertly designed to overcome sensitivity and specificity issues, without the need to carry out non-standard handling steps, generating results in just two days*.

Thermo Scientific™ Oxoid™ *Brilliance*™ Salmonella Agar plates may also be used as part of the ISO 6579-1:2017 horizontal method for the detection of *Salmonella* spp. in food, animal feed, and environmental samples.



Samples are diluted 1-in-10 in BPW and can be used for quality indicator testing prior to addition of a selective supplement.

For visually confirmed selective enrichment during *Salmonella* detection, Thermo Scientific™ Oxoid™ PrecisBlue Supplement is added to the diluted sample (alternatively, a standard novobiocin formulation may be used).

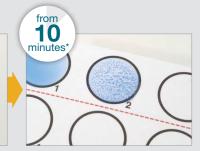


Samples are incubated overnight in a single, optimized enrichment medium.



A single *Brilliance* Salmonella Agar plate is inoculated using a 10 µL loop, before incubating overnight.

Purple-colored colonies are presumptive-positive for *Salmonella* species.



Confirm presumptive-positive colonies with a choice of a 10-minute latex test (Thermo Scientific™ Oxoid™ Salmonella Latex Test), PCR test (Thermo Scientific™ SureTect™ Salmonella species PCR Assay) or ISO 16140-6 validated method.

Key Benefits:

- Validated according to ISO 16140-2:2016 against the ISO 6579-1:2017 reference method and certified by NF Validation (AFNOR)
- Simple procedure—no specialised equipment required
- · Single overnight enrichment
- For Salmonella detection PrecisBlue Supplement can be added to the diluted sample for workflow confidence - inert blue dye indicates supplemented buffered peptone water
- Single sample transfer
- Single 24-hour plate incubation

- Broths and plates incubated at the same temperature for workflow simplicity
- Quick and convenient confirmation: Oxoid Salmonella Latex Test, SureTect Salmonella PCR Assay, or ISO 6579-1:2017 standard tests
- Reduced time to result: 2 days compared with up to 5 days for standard culture methods
- Brilliance Salmonella Agar contains novel Inhibigen™ technology, giving targeted specificity and reduced background flora

A rapid, simple, and robust culture-based workflow

The Salmonella Precis Method has been validated and certified by NF Validation (AFNOR) according to ISO 16140-2:2016. The Salmonella Precis method was compared to the ISO 6579-1:2017 reference method for the detection of *Salmonella* spp.

For flexibility, multiple validated confirmation options are available including the rapid Oxoid Salmonella Latex Test, the Suretect

Salmonella species PCR Assay, the Microbact GNB 24E kit, or by tests outlined in ISO 6579-1:2017.

AFNOR Certification validation certificate No. UNI 03/06-12/07 is available in PDF format from the AFNOR website

https://nf-validation.afnor.org/en/food-industry/salmonella-spp/

Workflow overview for Salmonella Precis Method validated according to NF VALIDATION for AFNOR Certification

Day 0 Up to 375 g Food and feed: **Environmental** Up to 375 g Cocoa Up to 150 g Milk powder, Infant samples: and chocolate **Animal feed:** formula* and Infant 25 g + 225 mL products: cereals*: BPW (ISO) • 25 g + 225 mL Up to 150 a diluted 1-in-10 with + 12 mg/L • 1 wipe + 225 mL Up to 375 g Up to 375 g Novobiocin BPW (ISO) • 1 swab + 10 mL diluted 1-in-10 with diluted 1-in-10 with (standard formulation • 1 sponge + 100 mL prewarmed + 12 mg/L BPW (ISO) or PrecisBlue BPW (ISO) Novobiocin Supplement) BPW (ISO) 22-28 h at 34-38 °C (standard formulation + 6 mg/L Vancomycin 20-26 h at 34-38 °C 20-26 h at 34-38 °C or PrecisBlue 18-24 h at 34-38 °C Recommendations of Supplement) or or the ISO 25 g + 225 mL **ONE Broth** or 20-26 h at 34-38 °C 6887-4:2017 method Thermo Scientific™ (for probiotics) Salmonella 20-26 h at 34-38 °C ONE Broth-Novobiocin 16-22 h at Salmonella Base 42±1 °C (standard formulation or PrecisBlue 16-22 h at Supplement) 42±1 °C 20-26 h at 34-38 °C

Day 1

Inoculate onto *Brilliance* Salmonella Agar *Incubate for 22-26 h at 36-38* °C

Day 2

Confirm typical colonies as *Salmonella* using the Oxoid Salmonella Latex Test,

SureTect Salmonella species PCR Assay, Microbact GNB 24E Kit, or tests outline in ISO 6579-1:2017.

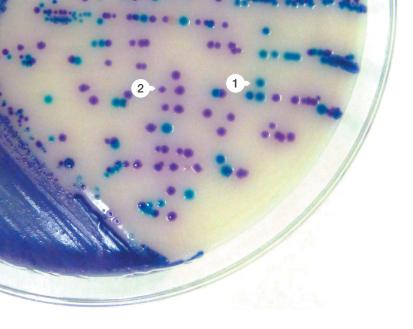
For the full list of confirmation procedures, refer to User Bulletin: Oxoid Salmonella Precis Method

*with or without probiotics

Reactions on Brilliance Salmonella Agar

	Colony colour/apperance				
	Purple	Blue	Colorless		
Enzyme targeted by chromogen	Salmonella (including lactose-positive Samonella)	Klebsiella, Enterobacter, Serratia	Citrobacter, other bacteria and yeasts		
Esterase	+	-/+	-		
β-glucosidase	-	+	-		





Example results - Mixed culture

- 1. Klebsiella colony
- 2. Salmonella colony

Product order information

Product description			Format	Order code
Oxoid Culture Media	Buffered Peptone Water	Buffered Peptone Water (ISO)	500 g, makes 25 L	CM1049B
		Buffered Peptone Water (ISO-meat peptone)	500 g, makes 25 L	CM1211B
	Novobiocin Supplement	PrecisBlue Supplement	1 vial makes 18L	SR0259A
		Novobiocin Supplement - freeze-dried	10 vials of 10 mg	SR0181E
		Novobiocin Supplement - liquid (40 mL/vial)	10 vials of 40 mg	SR0249A
	Vancomycin Supplement	Vancomycin Supplement - freeze-dried	10 vials of 3 mg	SR0186E
		Vancomycin Supplement - freeze-dried	10 vials of 5 mg	SR0247E
	ONE Broth Salmonella	ONE Broth Salmonella Base	500 g, makes 20 L	CM1091B
		ONE Broth Salmonella Supplement	10 vials, each for 225 mL	SR0242E
	Brilliance Salmonella Agar	Brilliance Salmonella Agar Base	500 g, makes 9.3 L	CM1092B
		Brilliance Salmonella Agar Selective Supplement	10 vials, each for 500 mL	SR0194E
Oxoid Salmonella Latex Kit		100 tests	DR1108A	

Please note that a range of alternative formats of culture media such as Bagged Enrichment Media and Prepared Plate Media are available. Please contact your local representative or technical services to find out more.

For more information about the Thermo Scientific Salmonella Precis Method, and other rapid culture media methods for detecting foodborne pathogens visit **thermofisher.com/precis**

