TECHNICAL DATA SHEET

SALMONELLA ENRICHMENT

ENRICHMENT FOR *SALMONELLA*

1 INTENDED USE

Salmonella Enrichment is a special formulation of Buffered Peptone Water that has been created and controlled for optimal detection of *Salmonella* in food products and feed.

Salmonella Enrichment with Tween®80 is used as enrichment medium for *Salmonella* analysis of products whose fat content exceeds 20%.

The *Salmonella* Enrichment line complies with NF EN ISO 6579-1 standard, Microbiology of the food chain - Horizontal method for the detection, enumeration and serotyping of Salmonella - Part 1 : detection of Salmonella spp., NF EN ISO 6887-1 Microbiology of food - General rules for the preparation of the initial suspension and decimal dilutions, Parts 2, 3, 4, & 5. *Salmonella* Enrichment can be used as Buffered Peptone Water in required methods but the inverse does not apply.

Salmonella Enrichment has been specially formulated for the validated methods IRIS *Salmonella*® and SESAME *Salmonella* TEST®.

2 PRINCIPLES

The peptide composition and osmotic balance of *Salmonella* Enrichment medium have been optimized to allow an exceptional resuscitation level of *Salmonella* strains.

3 TYPICAL COMPOSITION

The composition can be adjusted in order to obtain optimal performance.
The *Salmonella* Enrichment formulation conforms to that of Buffered Peptone Water.

For 1 liter of *Salmonella* Enrichment:

- Peptone ..... 10.0 g
- Sodium chloride ..... 5.0 g
- Disodium phosphate, anhydrous..... 3.56 g
- Monopotassium phosphate..... 1.5 g

pH if the ready-to-use media at 25 °C: 7.0 ± 0.2.

For 1 liter of *Salmonella* Enrichment + Tween® 80:

- Peptone ..... 10.0 g
- Sodium chloride ..... 5.0 g
- Disodium phosphate, anhydrous..... 3.56 g
- Monopotassium phosphate..... 1.5 g
- Tween® 80 ..... 10.0 g

pH of the ready-to-use media at 25 °C: 7.0 ± 0.2.

For 1 liter of *Salmonella* Enrichment 9X Concentrated:

- Peptone ..... 90.0 g
- Sodium chloride ..... 45.0 g
- Disodium phosphate, anhydrous..... 32.04 g
- Monopotassium phosphate..... 13.5 g

pH of the ready-to-use media at 25 °C: 7.0 ± 0.2.

NOTE: The *Salmonella* Enrichment 9X Concentrated formulation diluted 9 times conforms to that of Buffered Peptone Water.

4 PREPARATION

Preparation of dehydrated media Salmonella Enrichment:

- Dissolve 20.0 g of dehydrated media (BK194) in 1 liter of distilled or demineralized water.
- Stir slowly until complete dissolution.
- Dispense into tubes or vials.
- Sterilize in an autoclave at 121 °C for 15 minutes.
- Cool to room temperature.

✓ **Reconstitution:**
20.0 g/L

✓ **Sterilization:**
15 min at 121 °C

Preparation of Salmonella Enrichment broth from 9x Concentrated broth:

- Mix sterilely 1 volume of Salmonella Enrichment 9x concentrated broth (BM233) with 8 volumes of sterile distilled or demineralized water.

5 INSTRUCTIONS FOR USE

- Introduce aseptically **25 g** of the sample to be tested into **225 mL** ready-to-use ***Salmonella*** **Enrichment** in order to achieve a 1:10 dilution.

or

- Introduce aseptically **X g** of the sample to be tested into **9 X** mL ready-to-use ***Salmonella*** **Enrichment** in order to respect the 1:10 dilution ratio of 1 part sample + 9 parts of diluent mL.
- Mix well.
- Incubate at temperatures and for the periods required by the analytical protocol chosen.

6 QUALITY CONTROL

Dehydrated media: cream-white powder, free-flowing and homogeneous.

Prepared media: amber solution, limpid, may present a slight precipitate after prolonged storage.

Typical culture response (NF EN ISO 11133 – NF EN ISO 6579-1):

Microorganisms		Growth
(1) *Salmonella* Typhimurium	WDCM 00031	Positive, score 2
(1) *Salmonella* Enteritidis	WDCM 00030	Positive, score 2
(1) *Escherichia coli*	WDCM 00012	Positive, score 2
(1) *Cronobacter sakasakii*	WDCM 00214	Positive, score 2
(2) *Escherichia coli*	WDCM 00012	± 30 % colonies / T_0
(2) *Staphylococcus aureus*	WDCM 00034	± 30 % colonies / T_0

(1) After 18 hours of incubation at 37 °C (inoculum ≤ 10^2 microorganisms)
(2) After 45-60 minutes of incubation at 18-27 °C

7 STORAGE / SHELF LIFE

Salmonella **Enrichment, with or without Tween® 80:**

Dehydrated media: 2-30 °C.
Ready-to-use media in vials or flexible bags: 2-25 °C.
The expiration dates are indicated on the labels.

Salmonella **Enrichment 9x Concentrated:**
Medium in flexible bags: 15-30 °C.

Prepared media in vials or tubes (*) : 180 days at 2-25 °C**.**
(*) Benchmark value determined under standard preparation conditions, following manufacturer's instructions.

8 PACKAGING

- ***Salmonella*** **Enrichment:**

Dehydrated media:
500 g bottle..... BK194HA
5 kg drum BK194GC

Ready-to-use media:

10 x 225 mL vials..... BM13608
3 x 3 L flexible bags..... BM13708
2 x 5 L flexible bags..... BM14408
40 x 5 L flexible bags..... BM23708

- ***Salmonella*** **Enrichment + Tween® 80:**

Ready-to-use media:

3 x 3 L flexible bags..... BM16308
2 x 5 L flexible bags..... BM19808
10 x 225 mL vials..... BM22808

- ***Salmonella*** **Enrichment 9X Concentrated:**

Ready-to-use media:

4 x 2.5 L flexible bag..... BM23308

9 BIBLIOGRAPHY

Perry, D.F., and Quiring, C.. 1997. Fundamental aspects of enzyme/chromogenic substrate interactions in agar media formulations for esterase and glycosidase detection in *Salmonella*. In *Salmonella* and Salmonellosis-Proceedings. Ploufragan-France, 63-70.

Humbert, F., Lalande, F., Rose, V., et Salvat, G.. 1998. Evaluation d'un nouveau milieu d'isolement pour la mise en évidence des salmonelles dans les élevages et les denrées d'origine animale. 5ème congrès de la Société Française de Microbiologie. 128.

NF EN ISO 6579-1. April 2017. Microbiology of the food chain - Horizontal method for the detection, enumeration and serotyping of Salmonella - Part 1: Detection of *Salmonella* spp.x

NF EN ISO 6579-1/A1. March 2020. Microbiology of the food chain - Horizontal method for the detection, enumeration and serotyping of Salmonella - Part 1: Detection of *Salmonella* spp. - Amendment 1 Broader range of incubation temperatures, amendment to the status of Annex D, and correction of the composition of MSRV and SC.

NF EN ISO 6887-1. June 2017. Microbiology of the food chain - Preparation of test samples, initial suspension and decimal dilutions for microbiological examination - Part 1: General rules for the preparation of the initial suspension and decimal dilutions.

NF EN ISO 6887-2. June 2017. Microbiology of the food chain - Preparation of test samples, initial suspension and decimal dilutions for microbiological examination - Part 2: Specific rules for the preparation of meat and meat products.

NF EN ISO 6887-3. June 2017. Microbiology of the food chain - Preparation of test samples, initial suspension and decimal dilutions for microbiological examination - Part 3: Specific rules for the preparation of fish and fishery products.

NF EN ISO 6887-4. June 2017. Microbiology of the food chain - Preparation of test samples, initial suspension and decimal dilutions for microbiological examination - Part 4: specific rules for the preparation of miscellaneous products.

NF EN ISO 6887-5. May 2020. Microbiology of the food chain - Preparation of test samples, initial suspension and decimal dilutions for microbiological examination - Part 5: specific rules for the preparation of milk and milk products.

NF EN ISO 18593. July 2018. Microbiology of the food chain - Horizontal methods for sampling techniques from surfaces using contact plates and swabs.

NF EN ISO 19250. June 2013. Water quality — Detection of *Salmonella* spp.

NF U 47-100. July 2007. Animal health analysis methods - Isolation and identification of Salmonella or search for particular serovar's in the animal production sector.

NF U 47-101. November 2007. Animal health analysis methods - Isolation and identification of any salmonella serotypes or of specified salmonella serotypes among birds.

NF U 47-102. January 2008. Animal health analysis methods - Isolation and identification of any salmonella serotype or of specified salmonella serotypes among mammals.

10 ADDITIONAL INFORMATION

IRIS *Salmonella*®, COMPASS® and SESAME *Salmonella* TEST® are registered trademarks of SOLABIA S.A.S

The information provided on the labels take precedence over the formulations or instructions described in this document and are susceptible to modification at any time, without warning.

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