TM 2390 – TRYPTONE SOYA BROTH, W/ FERROUS SULPHATE

INTENDED USE

For isolation of *Salmonella* species from food samples in accordance with FDA BAM, 1998.

PRODUCT SUMMARY AND EXPLANATION

Tryptone Soya Broth, w/ Ferrous Sulphate is used to pre enrich *Salmonella* during isolation from egg specimens in accordance with FDA BAM. *Salmonella* constitute the most taxonomically complex group of bacteria among the *Enterobacteriaceae*. Human *Salmonella* infections are most commonly caused by ingestion of food, water or milk contaminated by human or animal excreta. Contaminated eggs or foods containing eggs have also been a source of food borne salmonellosis, with a significant proportion of these outbreaks being attributed to *Salmonella* Enteritidis. Since the level of contamination in individual eggs or a pool of such eggs may be low, enrichment to increase cell numbers can take several days.

Pre-enrichment of raw blended eggs with medium supplemented with ferrous sulphate, significantly enhance the growth of *Salmonella*. Disinfect eggs with 3:1 solution of 70% alcohol and 5% iodine/potassium iodide solution. Eggs are cracked aseptically by gloved hands and mix samples thoroughly until yolks are completely mixed with the albumen. These are incubated at room temperature (20-24°C) for 96 ± 2 h. After 96 ± 2 h, remove 25 ml of this mix and add to 225 ml Tryptone Soya Broth, w/ Ferrous Sulphate. After incubation for 24 ± 2 h at 35°C, transfer 0.1 ml mixture to 10 ml Rappaport-Vassiliadis medium and another 1 ml mixture to 10 ml tetrathionate broth. Vortex and incubate at optimum temperature for 24 ± 2 h depending upon the microbial load and type of the sample. These are further subcultured into XLD Agar or Hektoen Enteric Agar, incubate the plates 24 ± 2 h at 35°C and observe for the appearance of typical salmonellae colonies. Blue-green to blue colonies will be appeared in XLD Agar and pink colonies with or without black centers on HE Agar.

COMPOSITION

Ingredients	Gms / Ltr
Tryptone	17.000
Soya peptone	3.000
Sodium Chloride	5.000
Dipotassium hydrogen phosphate	2.500
Glucose (Dextrose)	2.500
Ferrous sulphate	0.035

PRINCIPLE

Tryptone and soya peptone provides the nitrogen source, long chain amino acids and vitamins, glucose acts as the carbon source, NaCl maintains the osmotic balance and phosphate acts as the buffering agent. Ferrous Sulphate helps in the recovery of injured Salmonella strains.

INSTRUCTION FOR USE

- Suspend 30.03 grams in 1000 ml purified / distilled water.
- Heat if necessary to dissolve the medium completely.
- Distribute in tubes and sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Cream to yellow homogeneous free flowing powder.
Appearance of prepared medium : Light yellow coloured clear solution may have slight particles
pH (at 25°C) : 7.3±0.2

INTERPRETATION

Cultural characteristics observed after incubation.

Microorganism	ATCC	Inoculum (CFU)	Growth	Incubation Temperature	Incubation Period
Salmonella Enteritidis	13076	50-100	Good-luxuriant	35-37°C	18.24 Hours
Salmonella Typhi	6539	50-100	Good-luxuriant	35-37°C	18.24 Hours
Salmonella Typhimurium	14028	50-100	Good-luxuriant	35-37°C	18.24 Hours
Escherichia coli	25922	50-100	Good-luxuriant	35-37°C	18.24 Hours

PACKAGING:

In pack size of 500 gm bottles.

STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

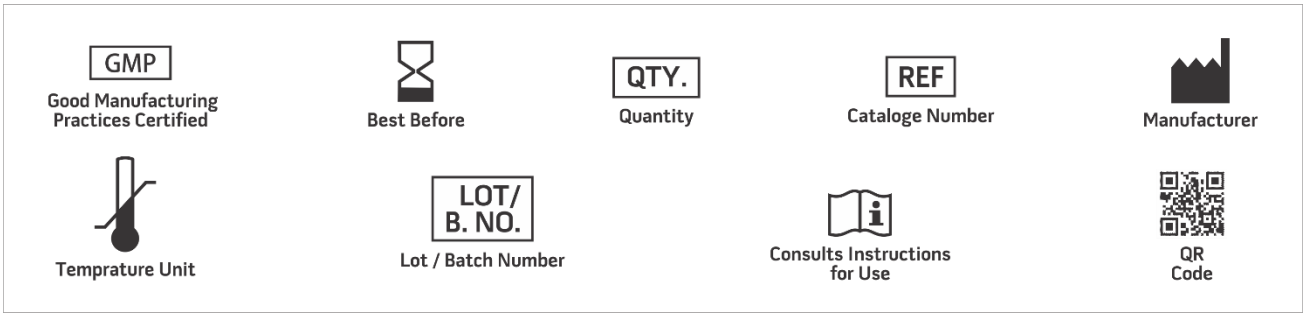
Product Deterioration: Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

DISPOSAL

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

REFERENCES

1. Cudjoe, K. S., Krona, R., Grøn, B. and Olsen, E. 1994. Int J Food Microbiol, 23(2): 149-158.
2. FDA, U.S. 1998. Bacteriological Analytical Manual. 8 ed. Gaithersburg, MD: AOAC International.
3. Tindall, B. J., Crimont, P. A. D ., Gorrity, G. M. and Euzesy, B. P 2005. Int. J. Sys. Evol. Microbiol., 55.



NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**

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