

CM 21568 - SALMONELLA SELECTIVE PRIMARY BROTH

INTENDED USE

Pre-enrichment medium used for recovery Salmonella species from foods prior to selective enrichment and isolation.

PRODUCT SUMMARY AND EXPLANATION

Salmonella Selective Primary Broth is a pre-enrichment medium designed to help recovery Salmonellae before transfer to a selective medium. This pre-enrichment medium is free from inhibitors and is well buffered and provides conditions for resuscitation of the cells that have been injured by processes of food preservation. It was noted by Edal and Kampelmacher that sub-lethal injury to Salmonella may occur due to food preservation techniques involving heat, desiccation, high osmotic pressure, preservatives or pH changes. This is particularly important for vegetable specimens, which have low buffering capacity. This medium can be used for testing dry poultry feed. Lactose Broth is frequently used as a pre-enrichment medium but it may be detrimental to recovery of Salmonella.

COMPOSITION

Ingredients	Gms / Ltr
Soya peptone	5.000
Yeast extract	2.000
Sorbitol	2.000
Disodium hydrogen phosphate	3.500
Potassium dihydrogen phosphate	1.500
Sodium chloride	5.000
Polysorbate 80 (Tween 80)	0.500
Pyruvic acid	0.500

PRINCIPLE

Soya peptone and yeast extract provides carbon, nitrogen compounds, long chain amino acids, vitamins, minerals and other essential growth nutrients. Sodium chloride maintains the osmotic balance and phosphates buffer the medium. Sorbitol is fermentable carbohydrate. Tween 80 and pyruvic acid acts as neutralizers.

INSTRUCTION FOR USE

- Dissolve 20.00 grams in 1000 ml distilled water.
- Heat if necessary to dissolve the medium completely.
- Dispense in tubes or flasks as desired.
- 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 with slight precipitate.
- pH (at 25°C) : 7.0

INTERPRETATION

Cultural characteristics observed after an incubation.



Microorganism	Strains	Inoculum (CFU/ml)	Growth	Recovery on MacConkey agar	Color of the colony	Incubation Temperature	Incubation Period
Salmonella Enteritidis	13076	50-100	Good-luxuriant	$\geq 50\%$	Colourless	35-37°C	18-24 Hours
Salmonella Typhi	6539	50-100	Good-luxuriant	$\geq 50\%$	Colourless	35-37°C	18-24 Hours
Salmonella Typhimurium	14028	50-100	Good-luxuriant	$\geq 50\%$	Colourless	35-37°C	18-24 Hours
Escherichia coli	25922	50-100	Fair-good	20-40%	Pink-red w/ bile precipitation	35-37°C	18-24 Hours
Salmonella Abony	6017	50-100	Good-luxuriant	$\geq 50\%$	Colourless	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. Angelotti, 1963, Academic Press, New York, N.Y.
2. Edel and Kampelmacher, 1973, Bull. W.H.O., 48:167.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition.
4. Jorgensen, J.H., Pfaller, M.A., Carroll, K.C., Funke, G., Landry, M.L., Richter, S.S and Warnock, D.W. (2015) Manual of Clinical Microbiology, 11th Edition. Vol. 1.
5. Juven, Cox, Bailey, Thomson, Charles and Schutze, 1984, J. Food Prot., 47:299.
6. Salfinger Y., and Tortorello M.L., 2015, Compendium of Methods for the Microbiological Examination of Foods, 5th Ed., American Public Health Association, Washington, D.C.

