TM 1630 - UNIVERSAL PRE-ENRICHMENT BROTH

INTENDED USE

For enrichment of sublethally injured *Salmonella* and *Listeria* species.

PRODUCT SUMMARY AND EXPLANATION

Environmental stress induces sublethal injury or metabolic damage to microbial cells. Recovery of such damaged microbial cells is achieved by growth in a non-selective media prior to isolation on selective media. Injury may result from many food processing and handling methods, including thermal treatment, refrigeration, freezing, drying and irradiation or from exposure to preservatives, acidity or low water activity. Universal Pre-Enrichment Broth, formulated by Bailey and Cox, is different from the other enrichment broths that either contains antibiotics or are not sufficiently buffered to support injured bacteria.

COMPOSITION

Ingredients	Gms / Ltr
Casein enzymic hydrolysate	5.000
Proteose peptone	5.000
Monopotassium phosphate	15.000
Disodium phosphate	7.000
Sodium chloride	5.000
Dextrose	0.500
Magnesium sulphate	0.250
Ferric ammonium citrate	0.100
Sodium pyruvate	0.200

PRINCIPLE

This medium is sufficiently buffered to support growth of injured bacteria. Casein enzymic hydrolysate and proteose peptone serve as sources of carbon, nitrogen, vitamins and minerals. Dextrose serves as the source of energy. Phosphates buffer the medium. Magnesium sulphate, sodium chloride and ferric ammonium citrate provide essential ions required for metabolism. Sodium pyruvate stimulates the metabolism of injured organisms.

INSTRUCTION FOR USE

- Dissolve 38.05 grams in 1000 ml distilled water.
- Heat if necessary, to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Mix well and dispense as desired.

QUALITY CONTROL SPECIFICATIONS

Appearance of Powder	: Light yellow to beige homogeneous free flowing powder.
Appearance of prepared medium	: Light amber coloured clear to slightly opalescent solution that may have a slight precipitate.
pH (at 25°C)	: 6.3±0.2

INTERPRETATION

Cultural characteristics observed after an incubation.

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Incubation Temperature	Incubation Period
Listeria monocytogenes	19118	50-100	Good	35-37°C	18-24 Hours
Salmonella Enteritidis	13076	50-100	Good	35-37°C	18-24 Hours
Salmonella Typhimurium	14028	50-100	Good	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. Downes F. P. and Ito K., (Ed.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., American Public Health Association, Washington, D.C.
2. Bailey J. S., and Cox N. A., 1992, J. Food Prot. 55:256-259.
3. Bailey J. S., Fletcher D. L. and Cox N. A., 1990, J. Food Prot., 53:473-477.
4. Juven B. J., Cox N. A., Bailey J. S., Thomson J. E., Charles O. W., and Shutze J. V., 1984, J. Food Prot., 47: 299-302.

GMP
Good Manufacturing Practices Certified

Best Before

QTY.
Quantity

REF
Cataloge Number

Manufacturer

Temprature Unit

LOT/
B. NO.
Lot / Batch Number

Consults Instructions for Use

QR Code

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

***For Lab Use Only**

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