

## CM 20983 – LISTERIA SELECTIVE BROTH BASE

### INTENDED USE

For selective isolation and cultivation of *Listeria monocytogenes* from clinical specimens.

### PRODUCT SUMMARY AND EXPLANATION

*Listeria monocytogenes* is a short, gram-positive, non-spore-forming rod shaped bacterium that appears coccoidal in older cultures. *Listeria* multiplies over a wide range of temperatures from 3°C to 45°C with optimum temperature range of 30°C to 37°C. *L. monocytogenes* has been isolated from numerous environmental sources such as silage, soil, decaying vegetation, sewage, damp earth, straw and faeces. Detection of *L. monocytogenes* in foods is not difficult. Low numbers of organisms are commonly isolated from raw milk, meat, vegetables, seafood and the food-processing environment. Enrichment procedures are used to isolate low numbers of *L. monocytogenes*.

Listeria Selective Broth is formulated as per Lovett et al for the selective enrichment of *Listeria* species from milk and milk products and other foods. Listeria Selective Broth is recommended by ISO Committee with a slight modification in the supplement.

### COMPOSITION

| Ingredients                    | Gms / Ltr |
|--------------------------------|-----------|
| Tryptone                       | 17.000    |
| Soya peptone                   | 3.000     |
| Yeast extract                  | 6.000     |
| Sodium Chloride                | 5.000     |
| Dipotassium hydrogen phosphate | 2.500     |
| Dextrose (Glucose)             | 2.500     |

### PRINCIPLE

This medium consists of Tryptone, soya peptone and yeast extract which provide carbon and nitrogen compounds, long chain amino acids, vitamins essential for bacterial metabolism. Dextrose is the energy source. The medium is rendered selective by addition of selective supplement. Cycloheximide inhibits the growth of saprophytic fungi. Nalidixic acid inhibits growth of gram-negative organisms and acriflavin suppresses gram-positive microorganisms. Acriflavin is an acridinic derivative with bacteriostatic properties towards many gram-positive bacteria and a weak fungicidal activity.

### INSTRUCTION FOR USE

Dissolve 36.0 grams in 1000 ml purified/distilled water.

Heat if necessary to dissolve the medium completely.

Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

Cool to 45-50°C and aseptically add rehydrated contents of 1 vial of Listeria Selective Supplement II or 2 vials of Listeria Selective Supplement II as desired.

Mix well and dispense into sterile tubes or flasks or as desired.

### QUALITY CONTROL SPECIFICATIONS



|                               |                                                         |
|-------------------------------|---------------------------------------------------------|
| Appearance of Powder          | : Cream to yellow homogeneous free flowing powder.      |
| Appearance of prepared medium | : Fluorescent yellow coloured, clear solution in tubes. |
| pH (at 25°C)                  | : 7.3 ± 0.2                                             |

#### INTERPRETATION

Cultural characteristics observed with added Listeria Selective Supplement II after incubation.

| Microorganism                       | ATCC  | Inoculum (CFU/ml) | Growth    | Incubation Temperature | Incubation Period |
|-------------------------------------|-------|-------------------|-----------|------------------------|-------------------|
| Listeria monocytogenes              | 19118 | 50-100            | Luxuriant | 30-35°C                | 24-48 Hours       |
| Listeria monocytogenes              | 19112 | 50-100            | Luxuriant | 30-35°C                | 24-48 Hours       |
| Listeria monocytogenes              | 19111 | 50-100            | Luxuriant | 30-35°C                | 24-48 Hours       |
| Escherichia coli                    | 25922 | $\geq 10^3$       | Inhibited | 30-35°C                | 24-48 Hours       |
| Candida albicans                    | 10231 | $\geq 10^3$       | Inhibited | 30-35°C                | 24-48 Hours       |
| Staphylococcus aureus subsp. aureus | 25923 | 50-100            | None-poor | 30-35°C                | 24-48 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. Ajello G., Hayes P. and Fuley J., 1986, Abstracts of the Annual Meeting, ASM, Washington, D.C.
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3. International Organization for Standardization (ISO), 1993, 10560 Ind. Technical, Corrigendum Cor. 1:1994.
4. Lee W. K. and McClain D., 1986, Appl. Environ. Microbiol., 52:1215.
5. Lovette J., Francis D. W. and Hunt J. M., 1987, J. Food Prot., 50:188.
6. McClain D. and Lee W. H., 1988, J. Assoc. off. Anal. Chem., 71:660.
7. Weis J., and Seeliger H. P. R., 1975, Appl. Microbiol. 30:29.

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|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| <br><b>GMP</b><br>Good Manufacturing<br>Practices Certified | <br><b>IVD</b><br>For In Vitro Diagnostic Use                                                                     | <br><b>QTY.</b><br>Quantity    | <br><b>LOT/<br/>B. NO.</b><br>Lot / Batch Number | <br><b>REF</b><br>Catalogue Number           | <br><b>Manufacturer</b> |
| <br><b>Temperature Unit</b>                                 | <br><b>EC REP</b><br>MedNet GmbH<br>Buckstrasse 10,<br>48163 Münster, Germany<br><b>Authorized Representative</b> | <br><b>European Conformity</b> | <br><b>QR<br/>Code</b>                           | <br><b>Consults Instructions<br/>for Use</b> | <br><b>Best Before</b>  |

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

\*For LabUse Only

