

## CM 21193 - MILK AGAR W/CETRIMIDE (DOUBLE PACK) (IS: 13428:1998, reaffirmed 2005)

### INTENDED USE

For detection and enumeration of *Pseudomonas aeruginosa* in water.

### PRODUCT SUMMARY AND EXPLANATION

Milk Agar w/Cetrimide is formulated as recommended by the BIS for detection and enumeration of *Pseudomonas aeruginosa* from water. *Pseudomonas aeruginosa* is the only species of *Pseudomonas* or gram-negative rod known to excrete pyocyanin and this ability of pigment production is exploited by the medium to identify the target strains. *P. aeruginosa* hydrolyses casein and produces a yellow to green diffusible pigment which helps in its identification.

### COMPOSITION

| Ingredients                    | Gms/ Ltr |
|--------------------------------|----------|
| Part I                         |          |
| Skim Milk powder               | 100.000  |
| Part II                        |          |
| Agar                           | 15.000   |
| Peptic digest of animal tissue | 2.500    |
| Sodium chloride                | 1.250    |
| Cetrimide                      | 0.300    |
| Yeast extract                  | 0.750    |

### PRINCIPLE

The media contains Peptic digest of animal tissue, Skim milk powder and Yeast extract which provide nitrogen, sulphur, vitamins and other growth nutrients to increase the rate of multiplication of *Pseudomonas* sp. Agar is the solidifying agent. Cetrimide (Cetyl trimethylammonium bromide) is a quaternary ammonium compound which inhibits a wide variety of microorganisms including *Pseudomonas* species other than *Pseudomonas aeruginosa*. Sodium chloride maintains the osmotic balance of the medium.

### INSTRUCTION FOR USE

1. Dissolve 100.00 grams of Part I in 750 ml distilled water. Gently heat to boiling with swirling to dissolve the medium completely. Sterilize by autoclaving at 15 psi (121°C) for 5 minutes.
2. Dissolve separately 19.80gm of Part II in 250ml. Gently heat to boiling with swirling to dissolve the medium completely. Sterilize by autoclaving at 15 psi (121°C) for 20 minutes.
3. After autoclaving cool both the parts to 50°C.
4. Aseptically add Part I solution to Part II solution, mix well and pour into sterile Petri plates.

### QUALITY CONTROL SPECIFICATIONS



#### Appearance of Dehydrated powder-

|                               |                                                    |
|-------------------------------|----------------------------------------------------|
| Part I                        | : White to cream, Homogeneous free flowing powder  |
| Part II                       | : Cream to yellow, Homogeneous free flowing powder |
| Appearance of Prepared medium | : Cream colored, slightly opalescent gel           |
| pH (at 25°C)                  | : 7.3± 0.2                                         |

#### INTERPRETATION

Cultural characteristics observed after incubation. Recovery rate is considered 100% for bacteria growth on Soya Agar.

| Microorganism                  | ATCC  | Inoculum (CFU/ml) | Growth    | Recovery | Pigment production | Incubation Temperature | Incubation Period |
|--------------------------------|-------|-------------------|-----------|----------|--------------------|------------------------|-------------------|
| <i>Pseudomonas aeruginosa</i>  | 27853 | 50-100            | Luxuriant | ≥50%     | Blue green         | 35-37°C                | 24-48 Hours       |
| <i>Escherichia coli</i>        | 25922 | ≥1000             | Inhibited | 0%       | -                  | 35-37°C                | 24-48 Hours       |
| <i>Pseudomonas maltophilia</i> | 13637 | ≥1000             | Inhibited | 0%       | -                  | 35-37°C                | 24-48 Hours       |

#### PACKAGING

In 100 & 500 gm packaging size.

#### STORAGE

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers below 25°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 powder if they show evidence of microbial contamination, discoloration, drying, or other signs of deterioration.

#### DISPOSAL

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

#### REFERENCES

1. International Organization for Standardization (ISO), Draft ISO/DIS 13428-1998.
2. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition
3. 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.

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|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <br>Good Manufacturing<br>Practices Certified | <br>Best Before        | <br>Quantity                          | <br>Catalogue Number | <br>Manufacturer |
| <br>Temperature Unit                          | <br>Lot / Batch Number | <br>Consults Instructions<br>for Use | <br>QR<br>Code       |                                                                                                       |

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