# TM 633 - MALACHITE GREEN BROTH

## INTENDED USE

For selective enrichment of *Pseudomonas aeruginosa*.

## PRODUCT SUMMARY AND EXPLANATION

*Pseudomonas* species is an environmental organism found in water and soil and on plants, including fruits and vegetables. *Pseudomonas aeruginosa* has the ability to survive in the aqueous environments like whirlpool bathwater, swimming pools etc. Whirlpools with elevated temperature, reduced chlorine and increased amounts of organic matter provide ideal conditions for the growth of *P. aeruginosa. P. aeruginosa* is commonly isolated from whirlpool waters that is coliform-negative.

Malachite Green Broth is recommended for the selective enrichment of *P. aeruginosa* as per Habs and Kirschner. It is also used for testing water samples as recommended by Schubert and Blum.

## COMPOSITION

| Ingredients | Gms / Ltr |
|---|---|
| **Peptic digest of animal tissue** | 15.000 |
| **Meat extract** | 9.000 |
| **Dipotassium hydrogen phosphate** | 1.100 |
| **Malachite green** | 0.030 |

## PRINCIPLE

Meat extract and peptic digest of animal tissue serve as sources of essential nutrients required for bacterial metabolism. Dihydrogen potassium phosphate serves to buffer the medium. Malachite green makes the medium selective for *P. aeruginosa* while suppressing the growth of the accompanying flora. The medium can also be used as a single strength medium by suspending 8.4 g/liter of medium, depending upon the sample being tested.

## INSTRUCTION FOR USE

- Dissolve 25.13 grams in 1000 ml distilled water.
- Heat if necessary to dissolve the medium completely.
- Dispense into tubes. Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.

## QUALITY CONTROL SPECIFICATIONS

**Appearance of Powder** : Light yellow to greenish yellow homogeneous free flowing powder.
**Appearance of prepared medium** : Peacock blue coloured clear solution without any precipitate.
**pH (at 25°C)** : 7.0±0.2

## INTERPRETATION

Cultural characteristics observed after an incubation.

| Microorganism | ATCC | Inoculum (CFU/ml) | Growth | Incubation Temperature | Incubation Period |
|---|---|---|---|---|---|

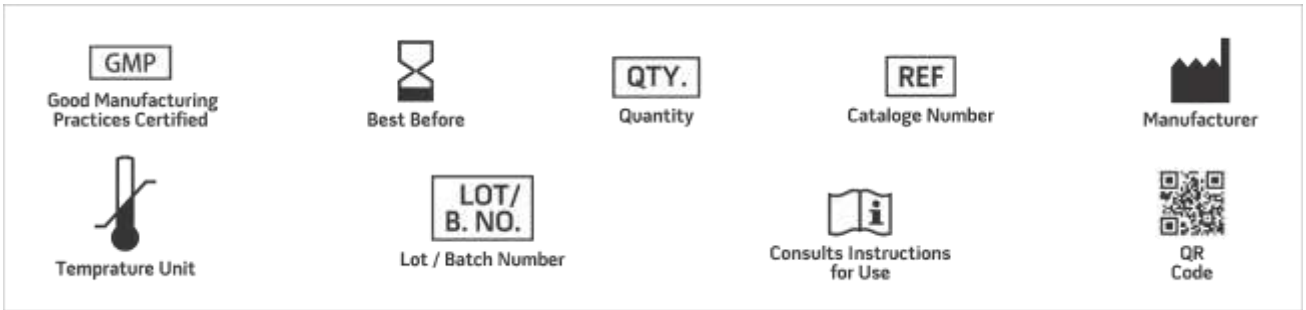
| | | | | | |
|---|---|---|---|---|---|
| *Escherichia coli* | 25922 | >=$10^3$ | Inhibited | 35-37°C | 18-24 Hours |
| *Pseudomonas aeruginosa* | 27853 | 50-100 | Luxuriant | 35-37°C | 18-24 Hours |

**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. Murray P. R., Baron J. H., Pfaller M. A., Jorgensen J. H. and Yolken R. H., (Eds.), 2003, Manual of Clinical Microbiology, 8th Ed., American Society for Microbiology, Washington, D.C.,
2. Hall N., 1984, UHL Lab Hotline 21: 9.
3. Habs H. and Kirschner K. H, 1943, ZHyg.,124:557-578.
4. Schubert R. and Blum U., 1974, Zbl. Bakt. Hyg.I. Orig. B.,158:583-587.




**NOTE:** Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.
***For Lab Use Only**
**Revision: 08 Nov., 2019**