

Malachite Green Broth, Granulated

GM1266

Malachite Green Broth, granulated is used for selective enrichment of *Pseudomonas aeruginosa*.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	15.000
Meat extract	9.000
Dipotassium hydrogen phosphate	1.100
Malachite green	0.030
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 25.13 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Dispense into tubes or flasks as desired. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

Principle And Interpretation

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 (1). 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(2).

Malachite Green Broth is recommended for the selective enrichment of *P.aeruginosa* as per Habs and Kirschner (3). It is also used for testing water samples as recommended by Schubert and Blum (4).

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/litre of medium, depending upon the sample being tested.

Quality Control

Appearance

Light yellow to greenish yellow granulated media

Colour and Clarity of prepared medium

Peacock blue coloured clear solution without any precipitate in tubes

Reaction

Reaction of 2.51% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH

6.80-7.20

Cultural Response

Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

Organism	Inoculum (CFU)	Growth
Cultural Response <i>Escherichia coli</i> ATCC 25922	>=10 ³	inhibited
<i>Pseudomonas aeruginosa</i> ATCC 27853	50-100	luxuriant

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

1. Murray P. R, Baron E, J., Jorgensen J. H., Pfaller M. A., Tenenbaum R. H., (Eds.), 2007, Manual of Clinical Microbiology, 9th 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, Z.Hyg.,124:557-578.
4. Schubert R. and Blum U., 1974, Zbl. Bakt. Hyg .I. Orig. B.,158:583-587.

Revision : 00 / 2014



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