Brown and Scott Modified (Twin Pack)

M782

Intended Use:

Recommended for confirmation of *Pseudomonas aeruginosa* in swimming pool waters.

Composition**

Ingredients	Gms / Litre
Part A	-
SM powder $	100.000
Part B	-
Peptone	5.000
Sodium chloride	5.000
HM peptone B #	1.500
Yeast extract	1.500
Agar	15.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters
#Equivalent to Beef extract
$ Equivalent to Instant non-fat milk

Directions

Part A: Suspend 100 grams in 500 ml purified / distilled water. Sterilize by autoclaving at 15 lbs pressure (121°C) for 5 minutes. Cool to 55°C.
Part B: Suspend 28 grams in 500 ml purified / distilled water and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool rapidly to 55°C. Mix Part A and Part B together and pour into sterile Petri plates.

Principle And Interpretation

Milk Agar was modified by Brown and Scott (2) for the confirmation of *Pseudomonas aeruginosa* in swimming pool waters. Swimming pool water is generally chlorinated potable water but it can also be from thermal springs or salt water. Microorganisms of concern are typically those from the body of the bather's including the arifices. *Pseudomonas aeruginosa* is one of the major supporting indicator organisms in the swimming pool. This organism is mainly responsible for ear and eye infection and is very likely to get disseminated in the swimming pool water due to constant contact of ears and eyes with the water.
SM powder, peptone, yeast extract, HM peptone B provide all the necessary nutrients mainly nitrogenous for the multiplication of *Pseudomonas aeruginosa*. *Pseudomonas aeruginosa* forms yellowish green colonies on this medium.
P. aeruginosa hydrolyzes casein and produces a yellowish to green diffusible pigment on Milk Agar. For isolation, filter 200 ml or less water of the swimming pool through sterile membrane filters.

Type of specimen

Water samples- swimming pool water sample

Specimen Collection and Handling

Place each membrane filter on M-PA Agar (M1121). Incubate the plates at 41.5±0.5°C for 72 hours. Typical *P. aeruginosa* colonies are 0.8-2.2 mm in diameter, flat in appearance with brownish to greenish centers. For confirmation, using Brown and Scott Agar, Modified, make a single streak from an isolated colony and incubate plates at 35-37°C for 24 hours. After incubation *P. aeruginosa* forms pigmented colonies. After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions :

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1. Some strains show less growth due to variable nutritional requirements.

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature.

Quality Control

Appearance

Part A : Cream to off white homogeneous free flowing powder Part B - Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Light amber coloured opalescent gel forms in Petri plates

Reaction

Reaction of 2.8% w/v aqueous solution of Part B at 25°C. pH : 7.4±0.2

pH

7.20-7.60

Cultural Response

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

Organism	Inoculum (CFU)	Growth	Pigment Production
Escherichia coli ATCC 25922 (00013*)	50-100	good-luxuriant	no pigment
Pseudomonas aeruginosa ATCC 27853 (00025*)	50-100	good-luxuriant	yellowish green

Key : (*) Corresponding WDCM numbers.

Storage and Shelf Life

Store between 10-30°C in a tightly closed container and the prepared medium at 20-30°C. Use before expiry date on the label. On opening, product should be properly stored dry, after tightly capping the bottle in order to prevent lump formation due to the hygroscopic nature of the product. Improper storage of the product may lead to lump formation. Store in dry ventilated area protected from extremes of temperature and sources of ignition Seal the container tightly after use. Product performance is best if used within stated expiry period.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with sample must be decontaminated and disposed of in accordance with current laboratory techniques (3,4).

Reference

1. Baird R.B., Eaton A.D., and Rice E.W., (Eds.), 2015, Standard Methods for the Examination of Water and Wastewater, 23rd ed., APHA, Washington, D.C.
2. Brown M.R.W. and Scott F. J.H., 1970, J. Clin. Pathol., 23:172.
3. Isenberg, H.D. Clinical Microbiology Procedures Handbook 2nd Edition.
4. 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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