Technical Information

Milk Agar (Brown and Scott Modified)(Twin Pack)

Product Code: DM 1782

Application: - Milk Agar (Brown and Scott Modified) (Twin Pack) is used for the confirmation of *Pseudomonas aeruginosa* in swimming pool waters.

Composition**

Ingredients	Gms / Litre
Part A	100.000
Instant non-fat milk	-
Part B	5.000
Peptic digest of animal tissue	5.000
Sodium chloride	1.500
Beef extract	1.500
Yeast extract	15.000
Agar	7.4±0.2
Final pH (at 25°C)	

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Water in Swimming pool is generally chlorinated potable water but it sometime water from thermal springs or salt lake water is also used. Microorganisms from the body of the bather's including the arifices are mainly responcible for contamination of water. *Pseudomonas aeruginosa* is one of the major supporting indicator organisms found 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. Milk Agar modified by Brown and Scott [(1)] is used for the confirmation of Pseudomonas aeruginosa in swimming pool waters.

Milk, peptic digest of animal tissue, yeast extract, beef extract provide all the necessary nutrients mainly nitrogenous for the multiplication *Pseudomonas aeruginosa* which 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. Place each membrane filter on M-PA Agar (DM2121). 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 Milk Agar, make a single streak from an isolated colony on a Milk Agar plate and incubate at 35-37°C for 24 hours. After incubation *P. aeruginosa* forms pigmented colonies.

Methodology

Part A: Suspend 100 grams of powder media in 500 ml distilled water. Sterilize by autoclaving at 15 Ibs pressure (121^{0}C) for 5 minutes. Cool to 55°C.

Part B: Suspend 28 grams of powder media in 500 ml distilled water and sterilize by autoclaving at 15 Ibs pressure (121^{0}C) for 15 minute. Cool rapidly to 55^{0}C. Mix part A and Part B together and pour into sterile petriplates.

Quality Control

Physical 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 range 7.20-7.60

Cultural Response/Characteristics
DM 1782: Cultural characteristics observed with added Middlebrook OADC Growth Supplement (FD018) after an incubation at 35-37°C for 2-4 weeks.

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

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.
Prepared Media: 2-8^0 in sealable plastic bags for 2-5 days.

Further Reading

1. Brown M.R.W. and Scott F. J.H., 1970, J. Clin. Pathol., 23:172.

Disclaimer :

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