Technical Information

BYE Agar

Product Code: DM 1470

Application: BYE Agar is a simplified medium developed for the cultivation of *Mycoplasma,* or Pleuropneumonia like organisms and L-forms of bacteria.

Composition**

Ingredients	Gms / Litre
Proteose peptone	10.000
Calf brain, infusion from	200.000
Beef heart, infusion from	250.000
Dextrose	2.000
Sodium chloride	5.000
Disodium phosphate	2.500
Yeast extract	2.000
Agar	13.000
Final pH (at 25°C)	7.9±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Mycoplasmas the smallest free-living microorganisms were designated pleuropneumonia like organism (PPLO), because of similarities to *Mycoplasma mycoides* (subsp. mycoides), the causative agent of bovine pleuropneumonia [1, 2]. BYE media are simple media developed to study cultivation distribution, habitat and possible pathogenesis of Mycoplasma. Pleuropneumonia like organisms and L-forms of bacteria by Barile, Yaguchi and Eveland [3]. These media can be used for isolation of L-forms of *Corynebacterium*, Neisseria, and Streptococcus PPLOs from urethritis, penile ulcerations and cervical specimens and are also used for detecting PPLO contamination of tissue culture cell-lines and membrane filter work [4, 5].

BYE Agar contains brain and heart infusion along with yeast extract, which provide carbon, nitrogen, vitamins and other growth factors required for the metabolism of Mycoplasma - Pleuropneumonia like organisms. Inoculations are made in duplicates. One set is incubated aerobically while the other anaerobically for 48 hours or more. Usually growth occurs within 3-5 days; however, negative results are reported after 10 days. Anaerobic conditions are most important for the first 3 days while secondary transfers can be incubated aerobically.

Methodology

Suspend 52 grams of powder media in 850 ml distilled water. Shake well & heat the medium completely. Sterilize by autoclaving at 15 lbs pressure (12 1°C) for 15 minutes. Cool to 50°C and aseptically add 150 ml of sterile human or animal blood or serum. Mix gently and pour into sterile Petri plates.

Quality Control

Physical Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.3% Agar gel.

Colour and Clarity of prepared medium

Yellow coloured, clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 5.2% w/v aqueous solution at 25°C. pH : 7.9±0.2

pH range 7.70-8.10

Cultural Response/Characteristics

DM1470: Cultural characteristics observed with added serum under humidified anaerobic conditions,after an incubation at 35-37°C for 5-10 days.

Organism	Growth
Mycoplasma bovis ATCC 25523	good-luxuriant
Mycoplasma gallinarium ATCC 19708	good-luxuriant
Mycoplasma pneumonia ATCC 15531	good-luxuriant
Streptococcus pneumonia ATCC 6303	good-luxuriant

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. Murray P.R., Baron E. J., Pfaller M.A., Tenover F.C., Yolken R.H.(Eds.), 1995, Manual of Clinical Microbiology, 6th Ed., ASM Press.
2. Collee J.G, Fraser A.G., Marmion B.P., Simmons. A (Eds.), 1996, Mackie and McCartney Practical Medical Microbiology, 14th Ed, Churchill Livingstone.
3. Barile, Yaguchi, Eveland, 1958, Am. J. Clin. Path. 30:171.
4. Barile, 1962, National Cancer Institute Monograph, No.7: 5.5. Barile, 1962, J. Bacteriol., 83:430.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
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