

Technical Information

Propionibacter Isolation Agar Base

Product Code: DM 1956

Application: - Propionibacter Isolation Agar is used for isolation of Propionibacteria.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	10.000
Yeast extract	10.000
Magnesium sulphate	0.050
Dipotassium phosphate	0.250
Agar	20.000
Final pH (at 25°C)	7.0±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Propionibacter Isolation Agar was originally formulated by Vedamuthu and Reinbold⁽¹⁾ It is now recommended by APHA also⁽²⁾ for selective isolation of Propionibacteria from foods like cheese. Isolation of Propionibacteria from foods and other sources is difficult as they grow slowly on solid media and presence of other microbial flora may overgrow them. They are also difficult to isolate because of their tendency towards anaerobiosis, due to which they fail to grow under conventional plating conditions. Propionibacter Isolation Agar is also known as YELA Agar⁽²⁾.

Casein enzymic hydrolysate and yeast extract in the medium provide nitrogenous compounds, sulphur, trace elements and vitamin B complex essential for the growth of Propionibacteria. Sodium lactate serves as the carbon source. Individual colonies may be confirmed by microscopic examination and by detection of propionic acid production by gas chromatography or HPLC.

Methodology

Suspend 40.3 grams of powder media in 1000 ml distilled water. Add 10 grams of sodium lactate to the medium. Shake well & heat to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 20 minutes.

Quality Control

Physical Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 2.0% agar gel.

Colour and Clarity of prepared medium

Dark amber coloured clear to slightly opalescent gel

Reaction

Reaction of 4.03% w/v aqueous solution at 25°C. pH : 7.0±0.2

pH range

6.80-7.20

Cultural Response/Characteristics

DM 1956: Cultural characteristics observed under anaerobic or microaerophilic conditions, after an incubation at 30-32°C for upto 11 to 14 days.

Organism

Propionibacterium rubrum ATCC 4871

Propionibacterium shermanii ATCC 9641

Propionibacterium thoenii ATCC 4874

Growth

good-luxuriant

good-luxuriant

good-luxuriant



Dehydrated Culture Media
Bases / Media Supplements

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° in sealable plastic bags for 2-5 days.

Further Reading

1. Vedamuthu E. and Reinbold G., 1975, Appl. Microbiol., 29:807.
2. Speck M. L., (Eds.), 1984, Compendium of Methods for the Microbiological Examination of Foods, 2nd Ed., APHA, Washington, D.C.

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