

Actinomycete Isolation Agar with Glycerol

Cat. 1459

For the isolation and cultivation actinomycetes from soil and water

Practical information

Applications	Categories
Selective isolation	Actinomycetes

Principles and uses

Actinomycete Isolation Agar with Glycerol is used for the isolation and cultivation of actinomycetes from soil and water.

Actinomycetes are a group of bacteria with many features. They produce antibiotics and other therapeutically useful compounds and are very important in the cycling of organic matter in the soil ecosystem. They are also found in water and vegetation. The isolation of actinomycetes from the mixed microflora present in nature is complicated by their characteristic slow growth relative to that of other soil bacteria.

Sodium propionate is a substrate used in anaerobic fermentation. Sodium caseinate is used as source of nitrogen. Dipotassium phosphate is used as a buffer. Asparagine is an amino acid that provides organic nitrogen. Magnesium sulfate and Ferrous sulfate are ions required in a big variation of enzymatic reactions, including DNA replication. Bacteriological agar is the solidifying agent.

Formula in g/L

Bacteriological agar	15	Ferrous sulfate	0,001
Magnesium sulfate	0,1	Sodium propionate	4
Potassium hydrogen phosphate	0,5	Sodium Caseinate	2
Asparagine	0,1		

Preparation

Suspend 22 grams of the medium in one liter of distilled water. Mix well. Heat with frequent agitation and boil during one minute or until completely dissolved. Add 5 ml of Glycerol and mix well. Distribute in appropriate containers. Sterilize in autoclave at 121°C for 15 minutes.

Instructions for use

- Inoculate and incubate at 30±2 °C for 72 hours.

Quality control

Solubility	Appearance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25°C)
w/o rests	Fine powder	Beige	Amber light opalescent	8,1±0,2

Microbiological test

Incubation conditions: (30±2 °C / 72 h).

Microorganisms	Specification
Streptomyces achromogenes ATCC 12767	Good growth
Streptomyces albus ATCC 3004	Good growth
Streptomyces lavendulae ATCC 8664	Good growth

Storage

Temp. Min.:2 °C
Temp. Max.:25 °C

Bibliography

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