Glucose Peptone Agar

M758

Glucose Peptone Agar is highly nutritious medium that can support the growth of fastidious microorganisms.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	20.000
Dextrose	10.000
Sodium chloride	5.000
Agar	15.000
Final pH (at 25°C)	7.2±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 50 grams in 1000 ml distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Mix well & pour in sterile Petri plates.

Principle And Interpretation

Glucose peptone Agar is recommended for general cultivation of wide variety of microorganisms. As it is rich in nutrients can also serve as excellent basal medium for glucose blood agar. With addition of suitable indicator, this medium can be used for the detection and cultivation of thermophilic organisms, associated with flat sour spoilage in Canned goods.

Agrobacterium species can also grow abundantly on media containing dextrose as carbohydrate source. Glucose peptone Agar with addition of Bromocresol purple (1% alcoholic solution) is suitable for cultivation of root nodulating bacteria (2). Peptic digest of animal tissue provides nitrogenous nutrients especially amino acids, and peptides. The presence of sodium chloride helps to maintain the osmotic balance. Dextrose serves as fermentable carbohydrate source and carbon source.

Quality Control

Appearance
Yellow coloured homogeneous free flowing powder

Gelling
Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium
Light yellow coloured clear to slightly opalescent gel forms in Petri plates.

Reaction
Reaction of 5.0% w/v aqueous solution at 25°C. pH : 7.2±0.2

pH
7.00-7.40

Cultural Response
M758: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours .

Organism	Inoculum (CFU)	Growth	Recovery
Agrobacterium tumefaciens ATCC 23308	50-100	Good - luxuriant	>=70%
Escherichia coli ATCC25922	50-100	Good - luxuriant	>=70%
Pseudomonas aeruginosa ATCC 27853	50-100	Good - luxuriant	>=70%
Staphylococcus. aureus ATCC25923	50-100	Good - luxuriant	>=70%
Enterococcus faecalis ATCC 29212	50-100	Good - luxuriant	>=70%

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium between 2-8°C. Use before expiry date on the label.

Reference

1. Atlas, R.M. (3rd Ed.), 2004, Handbook of Microbiological Media, CRC Press LLC.
2. Subba Rao N.S. 1977, Soil microorganisms and Plant Growth. Oxford SIBH Publishing Co.

Revision : 2 / 2015