# Technical Information

## Glucose Peptone Agar

## Product Code: DM 1758

**Application: -** 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

## Principle & Interpretation

Glucose peptone Agar is used 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.

## Methodology

Suspend 50 grams of dehydrated media powder in 1000 ml distilled water. Mix thoroughly & 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.

## Quality Control

**Appearance**
Cream to yellow coloured homogeneous free flowing powder

**Gelling**
Firm, comparable with 1.5% Agar gel

**Colour and Clarity**
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 Range**
7.00-7.40

**Cultural Response**
DM1758: Cultural characteristics observed after an incubation at 35-37°C for 18-24 hours.

| Organism | Inoculum (CFU) | Growth | Recovery |
|---|---|---|---|
| **Cultural Response** | | | |
| *Agrobacterium tumefaciens ATCC 23308* | 50-100 | Good – luxuriant | >=70% |
| *Escherichia coli ATCC 25922* | 50-100 | Good – luxuriant | >=70% |
| *Pseudomonas aeruginosa ATCC 27853* | 50-100 | Good – luxuriant | >=70% |
| *Staphylococcus. aureus ATCC 25923* | 50-100 | Good – luxuriant | >=70% |
| *Enterococcus faecalis ATCC 29212* | 50-100 | Good – luxuriant | >=70% |

## Storage and Shelf Life

**Dried Media:** Store below 30°C in tightly closed container and the prepared medium between 2-8°C. Use before expiry date on the label.
**Prepared Media**: 2-8° in sealable plastic bags for 2-5 days.

## Further Reading

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.

## Disclaimer :

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