

BCP Agar

For the isolation of coliforms.

Practical information

| Applications | Categories |
|---------------------|------------|
| Selective isolation | Coliforms |

Industry: General cultivation

Principles and uses

BCP Agar is a non-inhibitory medium used for the detection and isolation of coliforms and in differential studies based on lactose fermentation. BCP stands for bromocresol purple.

Peptone mixture and beef extract provide nitrogen, vitamins, minerals and amino acids essential for growth. Lactose is the fermentable carbohydrate providing carbon and energy. Bromocresol purple is a pH indicator. Bacteriological agar is the solidifying agent.

All coliforms ferment lactose with acid and gas production. This group includes the genera *Escherichia*, *Enterobacter*, *Citrobacter*, and *Klebsiella*. When lactose is fermented it produces acid that changes the color of the medium from blue-purple (alkaline) to yellow (acid). Blue colonies are lactose-negative and yellow colonies are lactose-positive.

Formula in g/L

| | | | |
|----------------------|-------|--------------|----|
| Bacteriological agar | 10 | Beef extract | 3 |
| Bromocresol purple | 0,025 | Lactose | 10 |
| Peptone mixture | 5 | | |

Preparation

Suspend 28 grams of the medium in one liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Dispense into appropriate containers and sterilize at 121°C for 15 minutes. Cool to 45-50°C, mix well and dispense into plates.

Instructions for use

- Inoculate and incubate at 35 ± 2°C.
- Reading must be carried out after 18-24 hours as longer incubation times may cause the diffusion of the acid in the medium and result in an error.

Quality control

| Solubility | Appearance | Color of the dehydrated medium | Color of the prepared medium | Final pH (25°C) |
|------------|-------------|--------------------------------|------------------------------|-----------------|
| w/o rests | Fine powder | Beige | Purple | 6,8 ± 0,2 |

Microbiological test

Incubation conditions: (35±2 °C / 18-24 h)

| Microrganisms | Specification | Characteristic reaction |
|--|---------------|-------------------------|
| <i>Klebsiella pneumoniae</i> ATCC 13883 | Good growth | Colony color Yellow |
| <i>Salmonella typhimurium</i> ATCC 14028 | Good growth | Colony color Blue |
| <i>Escherichia coli</i> ATCC 25922 | Good growth | Colony color Yellow |
| <i>Shigella sonnei</i> ATCC 58931 | Good growth | Colony color Blue |

Storage

Temp. Min.:2 °C
Temp. Max.:25 °C

Bibliography

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