



## Bromo Cresol Green Indicator

I002

### Intended use

Bromo Cresol Green Indicator is recommended as a pH indicator in growth medium for microorganisms.

### Composition\*\*

#### Ingredients

|                               |          |
|-------------------------------|----------|
| Bromocresol green sodium salt | 0.04 gm  |
| Distilled water               | 100.0 ml |

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

1. Bromo Cresol Green Indicator has wide range of application so follow appropriate direction as per application protocol.

### Principle And Interpretation

Bromo Cresol green (BCG) is a dye of the triphenylmethane family (triarylmethane dyes). The compound is synthesized by bromination of cresol purple (m-cresolsulfonphthalein). In aqueous solution, Bromocresol green will ionize to give the monoanionic form (yellow), that further deprotonates at higher pH to give the dianionic form (blue), which is stabilized by resonance. It becomes yellow at acidic pH level (pH 3.8) and Blue green at from pH 5.4. The Dissociation constant (pKa) of this reaction is 4.8. It is used as a pH indicator and as a tracking dye for DNA agarose gel electrophoresis. It can be used in its free acid form (light brown solid), or as a sodium salt (dark green solid).

### Type of specimen

Biological sample

### Specimen Collection and Handling

Follow appropriate techniques for handling specimens as per established guidelines

### Warning and Precautions

In Vitro diagnostic use only. Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

### Limitations

1. An indicator is not functional above its pH range because the indicator does not change color at these pH values.
2. If the substance or sample is contaminated, the color may be wrong.
3. Acid-base indicators show just one or two color changes.
4. Indicators measure pH at low accuracy, they only indicate sample acidity or alkalinity and not exact pH

## Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature

### Quality Control

- **Appearance** : Green coloured solution.
- **Clarity** : Clear without any particles.
- **Reaction** : At pH 3.8, the indicator turns yellow and at pH 5.4, the indicator is blue-green.
- **Sensitivity Test** : A mixture of 0.2ml of the solution and 100ml of carbon dioxide free water is blue.  
Not more than 0.2ml of 0.02M hydrochloric acid is required to change the colour of solution.

### Storage and Shelf Life

Store between 10-30°C in tightly closed container and away from bright light. Use before expiry date on label. On opening, product should be properly stored in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use.

### Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques

### Reference

1. Fred Senese. "Acid-Base Indicators". Frostburg State University Dept. of Chemistry.
2. Horobin R. W. and Kiernan J. A., 2002, 10th ed., CONN'S Biological Stains, A Handbook of Dyes, Stains and Flurochromes for Use in Biology and Medicine: 15(217)
3. INDIAN PHARMACOPOEIA 2018, VOL-I, 4.3(957)



Storage temperature



Do not use if package is damaged



In vitro diagnostic medical device



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HiMedia Laboratories Pvt. Limited,  
C-40, Road No.21Y, MIDC, Wagle  
Industrial Area, Thane (W) - 400604,  
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