

## TECHNICAL DATA SHEET

# BROMOCRESOL PURPLE (BCP) LACTOSE AGAR

DIFFERENTIATION OF *ENTEROBACTERIACEAE*  
CONFIRMATION OF COLIFORMS

## 1 INTENDED USE

Bromocresol Purple (BCP) Lactose Agar is a non-selective medium, used for the differentiation of *Enterobacteriaceae*. It is used for the confirmation of coliforms in the context of the standard T90-425, for the bacteriological examination of containers and recipients used in water bottling.

## 2 HISTORY

Initially described by Wurtz in 1892, litmus was replaced by bromocresol purple which is more sensitive and more stable.

## 3 PRINCIPLES

Fermentation of lactose to acid is revealed in the presence of bromocresol purple by a color change from violet-blue to yellow.

Lactose-negative bacteria form blue colonies.

## 4 TYPICAL COMPOSITION

The composition can be adjusted in order to obtain optimal performance.

For 1 liter of media :

- Tryptone ..... 5,0 g
- Meat extract..... 3,0 g
- Lactose..... 10,0 g
- Bromocresol purple ..... 25,0 mg
- Bacteriological agar..... 13,0 g

pH of the ready-to-use media at 25 °C : 7,0 ± 0,2.

## 5 PREPARATION

- Dissolve 31,0 g of dehydrated media (BK023) in 1 liter of distilled or demineralized water.
- Slowly bring to boiling, stirring with constant agitation until complete dissolution.
- Dispense into tubes or vials.
- Sterilize in an autoclave at 121 °C for 15 minutes.
- Cool and maintain the media in a molten state at 44-47 °C.
- Pour the media into sterile Petri plates and let solidify on a cold, flat surface.

✓ **Reconstitution :**  
31,0 g/L

✓ **Sterilization :**  
15 min at 121 °C

## 6 INSTRUCTIONS FOR USE

- Dry the plates in an incubator with the covers partially removed.
- Inoculate by streaking on the surface.
- Incubate at 37 °C for 18 to 24 hours.

✓ **Inoculation :**  
Surface streaking

✓ **Incubation :**  
18 h to 24 h at 37 °C

**Note :** A longer incubation time than 24 hours will lead to a re-alkalinization of the media and could modify the color of the colonies, leading to errors.

## 7 RESULTS

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Lactose-positive colonies are yellow and are differentiated as a function of the following characteristics :

- mucoid colonies : *Klebsiella*, *Escherichia coli*.
- colonies bluish at the edges : slow lactose-fermenting *Escherichia coli*.
- smooth or rough colonies which are transparent when examined with back lighting : *Escherichia coli*, *Citrobacter*.

Lactose-negative colonies are blue.

## 8 QUALITY CONTROL

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**Dehydrated media** : beige-green powder, free-flowing and homogeneous.

**Prepared media** : violet agar

Typical culture response after 24 hours of incubation at 37 °C, qualitative method of inoculation :

Microorganisms		Growth	Lactose fermentation
<i>Escherichia coli</i>	WDCM 00013	Good	Positive
<i>Escherichia coli</i>	WDCM 00179	Good	Positive
<i>Enterobacter aerogenes</i>	WDCM 00175	Good	Positive
<i>Salmonella</i> Enteritidis	WDCM 00030	Good	Negative
<i>Pseudomonas aeruginosa</i>	WDCM 00026	Good	Negative
<i>Pseudomonas aeruginosa</i>	WDCM 00024	Good	Negative

## 9 STORAGE / SHELF LIFE

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**Dehydrated media** : 2-30 °C.

The expiration date is indicated on the label.

**Prepared media in vials (\*)** : 180 days at 2-8 °C.

**Prepared media in plates (\*)**: 30 days at 2-8 °C.

(\*) Benchmark value determined under standard preparation conditions, following manufacturer's instructions.

## 10 PACKAGING

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**Dehydrated media** :

500 g bottle ..... BK023HA

## 11 BIBLIOGRAPHY

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Rodier, J.. 1984. L'analyse de l'eau. Identification des coliformes et en particulier d'*Escherichia coli*. Dunod 7ème Ed., 809.

T90-425. Février 1992. Essais des eaux. Examens bactériologiques des récipients et systèmes de bouchage destinés aux eaux conditionnées.

PR NF T90-425. Mars 2012. Qualité de l'eau - Examens bactériologiques des récipients et systèmes de bouchage destinés aux eaux conditionnées.

## 12 ADDITIONAL INFORMATION

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The information provided on the labels take precedence over the formulations or instructions described in this document and are susceptible to modification at any time, without warning.

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