

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 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

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

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

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

Dehydrated media :

500 g bottle BK023HA

11 BIBLIOGRAPHY

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

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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