

## TECHNICAL DATA SHEET

# DRIGALSKI LACTOSE AGAR

### ISOLATION OF *ENTEROBACTERIACEAE*

## 1 INTENDED USE

Drigalski Lactose agar is used for the selective isolation of *Enterobacteriaceae*. It allows the differentiation of bacteria according to their ability to ferment lactose in food, pharmaceutical, cosmetic and veterinary samples.

## 2 PRINCIPLES

The development of Gram positive bacteria is inhibited by crystal violet and sodium desoxycholate.

The fermentation of lactose is demonstrated by acid production that leads to a color change to yellow of the bromothymol blue indicator.

This media only partially inhibits the invasion by *Proteus*. In the event that *Proteus* contamination is suspected, it is possible to place 1 to 2 drops of alcohol in the cover of the Petri plate just prior to inoculation. The alcohol vapors limit invasion, without limiting the culture of the *Enterobacteriaceae*.

## 3 TYPICAL COMPOSITION

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

For 1 liter of media :

- Tryptone .....	15,0 g
- Meat extract.....	3,0 g
- Yeast extract .....	3,0 g
- Sodium desoxycholate .....	1,0 g
- Sodium thiosulfate.....	1,0 g
- Lactose.....	15,0 g
- Crystal violet.....	5,0 mg
- Bromothymol blue .....	80,0 mg
- Bacteriological agar.....	11,0 g

pH of the ready-to-use media at 25 °C : 7,4 ± 0,2.

## 4 PREPARATION

- Dissolve 49,1 g of dehydrated media (BK036) in 1 liter of distilled or demineralized water.
- Slowly bring to a boil, stirring constantly throughout until complete dissolution.
- Sterilize in an autoclave at 115 °C for 20 minutes.
- Cool and maintain the molten media at 44-47 °C.
- Pour into Petri plates and let solidify on a cool, flat surface.

✓ **Reconstitution :**  
49,1 g/L

✓ **Sterilization :**  
20 min at 115 °C

## 5 INSTRUCTIONS FOR USE

- Dry the plates in an incubator, covers partially removed.
- Inoculate the sample.
- Incubate at 37 °C for 24 to 48 hours.

✓ **Inoculation :**  
**Streak plating on surface**

✓ **Incubation :**  
**24 to 48 h at 37°C**

### Note

If only detection of lactose fermentation from purified colonies is being done, it is preferable to prepare the media in inclined tubes (slants).

## 6 RESULTS

Lactose positive bacteria (*Escherichia coli*, *Klebsiella*, *Enterobacter*) present yellow colonies.

Lactose negative bacteria ((*Salmonella*, *Shigella*, *Proteus*, *Providencia*, *Pseudomonas*) give rise to colonies that are blue to blue green. .

## 7 QUALITY CONTROL

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

**Prepared media :** Blue-green agar .

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

Microorganisms		Growth	Characteristics
<i>Escherichia coli</i>	WDCM 00013	Good, score 2	Yellow colonies
<i>Salmonella</i> Enteritidis	WDCM 00030	Good, score 2	Blue colonies
<i>Shigella sonnei</i>	WDCM 00127	Good, score 2	Blue-green colonies
<i>Proteus vulgaris</i>	ATCC® 13315	Good, score 2	Blue-green colonies
<i>Enterococcus faecalis</i>	WDCM 00087	Inhibited, score 0	-

## 8 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.

## 9 PACKAGING

**Dehydrated media :**

500 g bottle ..... BK036HA

## 10 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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