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
Escherichia coli	WDCM 00013	Good, score 2	Yellow colonies
Salmonella Enteritidis	WDCM 00030	Good, score 2	Blue colonies
Shigella sonnei	WDCM 00127	Good, score 2	Blue-green colonies
Proteus vulgaris	ATCC® 13315	Good, score 2	Blue-green colonies
Enterococcus faecalis	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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