

Formula * in g/L

Peptone.....	15,000
Meat Extract.....	3,000
Yeast Extract.....	3,000
Sodium Desoxycholate.....	1,000
Sodium Thiosulphate.....	1,000
Lactose.....	15,000
Brom Thymol Blue	0,080
Crystal Violet.....	0,005
Agar.....	15,000

Final pH 7,4± 0,2 at 25 °C

* Adjusted and /or supplemented as required to meet performance criteria

Directions

Suspend 53 g of the powder in 1 L of distilled water and heat to the boil or complete dissolution. Distribute in suitable containers and sterilize in autoclave at 115°C for 15 minutes.

Description

Drigalski Lactose Agar is a selective medium used for the isolation of gram-negative bacteria from clinical specimens and the detection of coliforms in food products. The gram-positive bacteria are inhibited by sodium desoxycholate and crystal violet, but the selectivity of this medium is less effective than McConkey Agar and thus, some times, minute enterococci colonies may be seen. The gram-negative bacteria grow with different characteristics depending on their ability to ferment lactose. Coliform organisms (*Escherichia*, *Klebsiella*, *Citrobacter*, *Enterobacter*) ferment lactose with production of acids that turns the indicator to yellow and the colonies appears yellow.

Gram-negative lactose non-fermenting bacteria (*Salmonella*, *Shigella*, *Proteus*, *Providencia*, *Hafnia*, *Serratia*, *Morganella*, *Edwardsiella*, *Alcaligenes*, *Pseudomonas*) grow producing green-blue colonies.

Yersinia produces minute green-blue colonies after 24 h of incubation at 37°C. To isolate them it is advisable a supplementary 24 h incubation at 30°C.

The swarming of certain *Proteus* strains is only partially inhibited in the Drigalski Agar. If their presence is suspected, deposit 1-2 drops of alcohol in the cover of the Petri dish just before inoculating. Alcohol vapours limit the invasion but have no effect on the growth of enterobacteria.

Quality control

Incubation temperature: 35-37 °C

Incubation time: 24-48h

Inoculum: Practical range 100 ± 20 CFU. Min. 50 CFU (Productivity) / 10⁴-10⁶ CFU (Selectivity) according to ISO 11133:2014/Amd 1:2018 .

Microorganism
Growth
Remarks

<i>Enterococcus faecalis</i> ATCC® 29212	Inhibited to poor	-
<i>Yersinia enterocolitica</i> ATCC® 9610	Productivity > 0.50	Green- blue puntiform colonies
<i>Escherichia coli</i> ATCC® 25922	Productivity > 0.50	Yellow colonies
<i>Escherichia coli</i> ATCC® 8739	Productivity > 0.50	Yellow colonies
<i>Salmonella typhimurium</i> ATCC® 14028	Productivity > 0.50	Green- blue colonies
<i>Citrobacter freundii</i> ATCC® 43864	Productivity > 0.50	Yellow colonies

References

· Ewing, W. H. (1986) Edwards and Ewing's Identification of Enterobacteriaceae. 4th edition. Elsevier Science Publication Co. Inc. New York. USA

Storage

For laboratory use only. Keep tightly closed, away from bright light, in a cool dry place (+4 °C to 30 °C).