Condalab

Reference: 4007 **Technical Data Sheet**

Product: LYSINE IRON AGAR

Specification

Differential medium for Enterobacteria

Presentation

	Packaging Details	Shelf Life	Storage
20 Tubes / Slant Tube 16 x 113 mm with: 7,5 ± 0,3 ml	1 box with 20 tubes, 16x113 mm glass tubes, ink labelled and metal cap.	9 months	8-25°C

Composition

Composition (g/l).

Gelatin peptone	5.00
Yeast extract	3.00
Dextrose	1.00
Lysine	10.0
Ammonium ferric citrate	0.50
Sodium thiosulfate	0.04
Bromocresol purple	0.02
Agar	15.00

Description /Technique

Description

LIA medium permits differentiation of Enterobacteriaceae based on its capacity to deaminate and decarboxylate lysine and produce hydrogen sulfide.,

Was developed for identification of strains of Salmonella arizonae, especially those of rapid fermentation of lactose. In TSI, the lactose fermenting strains produce an acidification of the medium prevents the production of hydrogen sulfide. And lysine iron agar, Salmonella species are identified by their ability to produce lysine and decarboxylating hydrogen sulfide.

Gelatin peptone and yeast extract are sources of nitrogen, carbon, vitamins and minerals. Ferric ammonium citrate and sodium thiosulfate are indicators of hydrogen sulfide production, the formation of a black precipitate of iron sulfide. Bromcresol purple is a pH indicator. The fermentable sugar is glucose and fermentation occurs acidification bottom of the tube, which turns yellow. Lysine is the substrate lysine decarboxylase and lysine deaminase. The decarboxylation of lysine alkaline medium, which changes to purple. Deamination of lysine leads to the formation of red or orange compounds in presence of oxygen (in the medium surface).

Acidification of the bottom of the tube in negative strains lysine decarboxylase may prevent detection of hydrogen sulfide production. Therefore, Proteus species producing hydrogen sulfide can not blacken the medium.

Technique

From a single colony, using a handle sting, biting planting is done the background and making a stretch mark on the inclined surface. The tubes were incubated under aerobic conditions (with cap unscrewed) at 35 ± 2 ° C for 24 h.

Quality control

Physical/Chemical control

Color : Violet pH: 6.7 ± 0.2 at 25°C

Microbiological control

Inoculate by stabbing the butt + streak the slant

Aerobiosis. Incubation at 35 ± 2°C, reading after 18-24 hours

Microorganism	Growth
Escherichia coli ATCC® 25922, WDCM 00013	A.slant/bottom:purple;SH2 (-)
Proteus mirabilis ATCC® 43071	A. Slant: Red; A. butt: yellow-ocre; SH2 (-)
Salmonella typhimurium ATCC® 14028, WDCM 00031	A. slant/bottom: purple; SH2 (+)
Shigella flexneri ATCC® 12022, WDCM 00126	A.slant: purple;A.bottom: yellow-ocre; SH2 (-)

Sterility Control

Incubation 48 hours at 30-35°C and 48 hours at 20-25°C: NO GROWTH
Check at 7 days after incubation in same conditions

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