

## LYSINE IRON AGAR

Differential medium for Enterobacteria isolation.

### TYPICAL FORMULA (g/l)

Peptospecial.....	5.0
Glucose.....	1.0
L-Lysine Hydrochloride.....	10.0
Ferric Ammonium Citrate.....	0.5
Yeast Extract.....	3.0
Sodium Thiosulfate.....	0.04
Brom Cresol Purple.....	0.02
Agar.....	14.5
Final pH 6.7 ± 0.2 at 25 °C	

### DESCRIPTION

**LYSINE IRON AGAR** is a medium used for differentiating microorganisms, especially *Salmonella* spp. on the basis of lysine decarboxylation/deamination and H<sub>2</sub>S production.

### PRINCIPLE

Peptospecial is the source of proteins. Glucose is the substrate for the fermentation. L-Lysine, Ferric Ammonium Citrate and Sodium Thiosulfate, are the specific substrates for the reactions of identification. Yeast extract is a source of amino acids and vitamins of group B. Brom Cresol Purple is the pH indicator. Agar is the solidifying agent.

### PREPARATION

Completely dissolve the bottle content in water bath at 100°C. Cooling at 45-50°C and gently dispense into final tubes in aseptic condition. Allow the medium to solidify in a position that provides a short slant and a deep butt.

### TECHNIQUE

Pick the center of a well-isolated colony from a fresh, pure culture with a needle and inoculate it by stabbing to the base of the butt and streaking the slant of the medium in the tube.

Cap the tube loosely to ensure aerobic conditions. Incubate at 36 ± 1°C for 18-24 hours.

Examine after 18-24 hours and 40-48 hours for growth and color change in the butt and the slant of the medium and blackening at the apex of the slant.

### INTERPRETATION OF RESULTS

Lysine decarboxylase reaction results are:

Positive: purple (alkaline) butt, purple slant.

Negative: yellow (acid) butt, purple slant.

Lysine deaminase reaction results are:

Positive: red slant.

Negative: purple slant.

Hydrogen sulphide reaction:

Positive: blackened medium at the apex of the slant.

### STORAGE

10-25°C away from light, until the expiry date on the label or until signs of deterioration or contamination are evident.

### WARNING AND PRECAUTIONS

The product is not classified as hazardous by current legislation and does not contain harmful substances in concentrations of ≥ 1%. The product is designed for *In vitro* diagnostic use and must be used only by properly trained operators.

### DISPOSAL OF WASTE

Disposal of waste must be carried out according to national and local regulations in force.

### REFERENCES

1. Edwards, P.R., and M.A. Fife. 1961. Appl. Microbiol. 9 : 478.
2. MacFadding, J.F. 1985. Media for isolation-cultivation-identification-maintenance of medical bacteria, vol. 1. Williams & Wilkins, Baltimore, MD.



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## PRODUCT SPECIFICATIONS

### NAME

**LYSINE IRON AGAR**

### PRESENTATION

Ready-to-use glass bottles containing 200 ml of medium.

### STORAGE

10-25°C

### PACKGING

Code	Content	Packaging
412040	6 bottles x 200 ml	6 bottles in cardboard box

### pH OF THE MEDIUM

6.7 ± 0.2

### USE

**LYSINE IRON AGAR** is a medium used for differentiating microorganisms, especially *Salmonella* spp. on the basis of lysine decarboxylation/deamination and H<sub>2</sub>S production.

### TECHNIQUE

Refer to technical sheet of the product.

### APPEARANCE OF THE MEDIUM

Very slightly opalescent purple medium without precipitate.

### SHELFLIFE











1 year.

### QUALITY CONTROL

- Control of general characteristics, label and print.
- Sterility control:  
7 days at 25 ± 1°C, in aerobiosis.  
7 days at 36 ± 1°C, in aerobiosis.
- Microbiological control:  
Inoculum for productivity: 10-100 UFC/ml.  
Inoculum for selectivity: 10<sup>4</sup>-10<sup>5</sup> UFC/ml.  
Inoculum for specificity: ≤ 10<sup>4</sup> UFC/ml.  
Incubation conditions: 18-48 h at 36 ± 1°C.

Microorganism	ATCC	Butt	Slant	H <sub>2</sub> S
<i>Escherichia coli</i>	25922	purple	purple	-
<i>Salmonella typhimurium</i>	14028	purple	purple	+
<i>Klebsiella pneumoniae</i>	13883	purple	purple	-
<i>Citrobacter freudi</i>	8090	yellow	purple	+
<i>Proteus mirabilis</i>	25933	yellow	red	-

### TABLE OF SYMBOLS

 Batch code	 <i>In vitro</i> Diagnostic Medical Device	 Manufacturer	 Use by	 Fragile, handle with care
 Catalogue number	 Temperature limitation	 Contains sufficient for <n> tests	 Caution, consult accompanying documents	 Do not reuse



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