CM 22,742 - LYSINE IRON AGAR SLANT

INTENDED USE

Fordetection ofenteric organism especially *Salmonella arizonae*, based on their ability to decarboxylate or deaminate lysine and to form hydrogen sulphide (H_2S)

PRODUCT SUMMARY AND EXPLANATION

LysineIronAgar was developed by Edwards and Fife to detect lactose fermenting Salmonellae. Salmonellae are known to decarboxylate lysine rapidly and produce large amounts of hydrogen sulphide. This medium is a sensitive medium for the detection of lactose fermenting and lactose non-fermenting *Salmonella* species. Many strains of this group ferment lactose very rapidly thus suppressing H_2S production on Triple Sugar Iron Agar. So there is a possibility that the organisms frequently found in food poisoning outbreaks could be overlooked. Thatcher and Clark described the isolation of *Salmonella* species from foods from selective agar and to inoculate it on Lysine Iron Agar and Triple Sugar Iron together. Using these two media greater discrimination can be made between coliform organisms e.g. *Escherichia coli* and *Shigella* species.

COMPOSITION

Ingredients	Gms / Ltr
Agar	15.000
L-Lysine	10.000
Peptone	5.000
Yeast extract	3.000
Dextrose (Glucose)	1.000
Ferric ammonium citrate	0.500
Sodium thiosulphate	0.040
Bromocresol purple	0.020

PRINCIPLE

Peptoneand yeast extract provide essential nutrients. Dextrose is a source of fermentable carbohydrate. Ferric ammonium citrate and sodiumthiosulphate are indicators of H_2S formation. Cultures that produce hydrogen sulphide cause blackening of the mediumdue to ferrous sulphide production. Lysine decarboxylation causes an alkaline reaction (purple colour) to give the aminecadaverine and the organisms which do not decarboxylate lysine, produce acid butt (yellow colour). Organisms thatdeaminate lysine, form alpha - ketocarboxylic acid, which reacts with iron salt near the surface of the medium under theinfluence of oxygen to form reddish-brown compound. The medium is stabbed to the base of the butt and streaked onslant.

INSTRUCTION FOR USE

Inoculatethebacterialculture with an inoculating needle by stabbing the base of the butt and streaking on the slants.

QUALITY CONTROL SPECIFICATIONS

Appearance	:	Purple coloured, clear to slightly opalescent gel forms in tubes as slants
Quantity of Medium	:	8 ml of medium in glass tube.
pH (at 25°C)	:	6.7±0.2

INTERPRETATION

Culturalcharacteristics observed after an incubation.

Microorganism	ATCC	Growth	H_2S	Slant	Butt	Incubation Temperature	Incubation Time
Escherichia coli	25922	Luxuriant	Negative reaction	Alkaline reaction, purple or no colour change	Alkaline reaction, purple or no colour change	35-37°C	18-24 hours.
Citrobacter freundii	8090	Luxuriant	Positive reaction, blackening of medium	Alkaline reaction, purple or no colour change	Acidic reaction, yellowing of the medium	35-37°C	18-24 hours.
Shigella flexneri	12022	Luxuriant	Negative reaction	Alkaline reaction, purple or no colour change	Acidic reaction, yellowing of the medium	35-37°C	18-24 hours.
Proteus mirabilis	25933	Luxuriant	Positive reaction, blackening of medium	Deep red,lysine deamination	Acidic reaction, yellowing of the medium	35-37°C	18-24 hours.
Salmonella arizonae	13314	Luxuriant	Positive reaction, blackening of medium	Alkaline reaction, purple or no colour change	Alkaline reaction, purple or no colour change	35-37°C	18-24 hours.
Salmonella enteritidis	13076	Luxuriant	Positive reaction, blackening of medium	Alkaline reaction, purple or no colour change	Alkaline reaction, purple or no colour change	35-37°C	18-24 hours.
Salmonella typhimurium	14028	Luxuriant	Positive reaction, blackening of medium	Alkaline reaction, purple or no colour change	Alkaline reaction, purple or no colour change	35-37°C	18-24 hours.

PACKAGING:

Kitof10Ready-To-Use Slants containing 8 ml medium in each glass tube.

STORAGE

Onreceipt, store tubes in the dark at 2 – 8°C. Avoid freezing and overheating. Do not open until ready to use. Minimize exposure to light. Tubed media stored as labeled until just prior to use may be inoculated up to the expiration date and incubated for the recommended incubation times. Allow the medium to warm to room temperature before inoculation. **Product Deterioration:** Do not use tubes if they show evidence of microbial contamination, discoloration, drying or other signs of deterioration.

DISPOSAL

Usermustensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques.

REFERENCES

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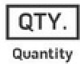
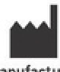
3. Moeller V., 1954, ActaPathol. Microbiol. Scand., 355:25
4. Thatcher F.S. and Clark D.S., 1968, University of Toronto Press, p. 10
5. Johnson J.G., Kunz L.J., Barron W. and Ewing W.H., 1966, Appl. Microbiol., 14:21
6. Finegold S.M. and Martin W.J., 1982, Bailey and Scotts Diagnostic Microbiology, 6th ed., The C.V. Mosby Co., St. Louis



Quantity

Lot / Batch Number

Temprature Unit


Manufacturer

Best Before

Certification of
Good Manufacturing Practices

Catalogue No.

Authorized Representative

European Conformity

Consults Instructions for use :

QR
Code

For In Vitro Diagnostic Use

NOTE: Please consult the Material Safety Data Sheet for information regarding hazards and safe handling Practices.

***For Lab Use Only**