PRODUCT INFORMATION

Lysine Iron Agar

Cat. No. L12-113

DESCRIPTION

Lysine Iron Agar is used for differentiating microorganisms based on lysine decarboxylation/deamination and the production of hydrogen sulfide. Edwards and Fife developed Lysine Iron Agar to detect *Salmonella arizonae*. Since *Salmonella arizonae* ferments lactose rapidly, it was found that hydrogen sulfide production on Triple Sugar Iron agar was suppressed. By eliminating lactose and using lysine, this medium differentiates enteric bacilli based on their ability to decarboxylate or deaminate lysine.

FORMULA (g/L)

Pancreatic Digest of Gelatin	5.0 g	Dextrose	1.0 g
Yeast Extract	3.0 g	Sodium Thiosulfate	0.04 g
L-Lysine, HCl	10.0 g	Ferric Ammonium Citrate	0.5 g
Bromocresol Purple	0.02 g	Agar	13.5 g

Final pH: 6.7 ± 0.2 at 25 ºC

*Grams per liter may be adjusted or formula supplemented to obtain desired performance.

PREPARATION

Mix 33.0 grams of the medium in one liter of purified water until evenly dispersed. Heat with repeated stirring and boil for one minute to dissolve completely. Distribute and autoclave at 121°C for 15 minutes.

QUALITY CONTROL SPECIFICATIONS

1. The powder is homogenous, free flowing and greyish beige.
2. Visually the prepared medium is clear to slightly hazy and red-purple.
3. Expected cultural response after 18-48 hours at 35 ºC.

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ORGANISM	Lysine Decarboxylation (Butt)	Lysine Deamination (slant)	H^2S
Citrobacter freundii ATCC 8090	-Yellow	-Purple	+
Escherichia coli ATCC 25922	+Purple	-Purple	-
Proteus mirabilis ATCC 12453	-Yellow	+Red	-
Salmonella typhimurium ATCC 14028	+Purple	-Purple	+

STORAGE

Store the sealed bottle containing the dehydrated medium at 2 to 30°C. Once opened and recapped, place the container in a low humidity environment at the same storage temperature. Protect it from moisture and light. The dehydrated medium should be discarded if it is not free flowing or if the color has changed from the original color.

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