

PRODUCT INFORMATION



Lysine Iron Agar

Cat. No. L12-113

Date of Issue:
10/01/17

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.

PREPARATION

Mix 33 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.

Formula* per Liter:

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

Final pH: 6.7 ± 0.2 at 25°C

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

QUALITY CONTROL SPECIFICATIONS

1. The powder is homogeneous, 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°C.

Microorganisms:	Lysine Decarboxylation (Butt)	Lysine Deamination (Slant)	H ² S
<i>Citrobacter freundii</i> ATCC® 8090	-Yellow	-Purple	+
<i>Escherichia coli</i> ATCC® 25922	+Purple	-Purple	-
<i>Proteus mirabilis</i> ATCC® 12453	-Yellow	+Red	-
<i>Salmonella typhimurium</i> 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.