

## Product Data Sheet

### **LYSINE IRON BROTH BASE (LYSINE IRON CYSTINE BROTH BASE)**

**Product No.** GB-DCM-00353-1A

#### **INTENDED USE**

For rapid presumptive detection of Salmonellae in food products and feed materials.

#### **PRODUCT SUMMARY**

Lysine Iron Cystine Broth is a modification of the formula of Hoben, Aston and Peterson. They described the usefulness of this medium for detecting Salmonellae in food samples in three days, thus reducing the holding time for foods and food ingredients.

#### **Product Specifications**

<b>Ingredients</b>	<b>Gms / Ltr</b>
Tryptone	5.000
Yeast extract	3.000
L-Lysine hydrochloride	10.000
Mannitol	5.000
Dextrose (Glucose)	1.000
Salicin 1.000 L-Cystine	0.100
Ferric ammonium citrate	0.500
Sodium thiosulphate	0.100
Neutral red	0.025

#### **PRINCIPLE**

This medium consists of Tryptone and L-Cystine which provide carbonaceous and nitrogenous compounds. Yeast extract supplies Vitamin B complex. Dextrose, mannitol and salicin are the fermentable carbohydrates. Ferric ammonium citrate and sodium thiosulphate are the indicators of hydrogen sulphide formation. Cultures that produce hydrogen sulphide cause blackening of the medium due to ferrous sulphide production. Lysine decarboxylation causes an alkaline reaction (purple colour) to give the amine cadaverine. The organisms, which do not decarboxylate lysine, produce acid butt (yellow colour). Organisms that deaminate the lysine form  $\alpha$ -ketocarboxylic acid, which reacts with iron salt near the surface of the medium under the influence of oxygen to form reddish-brown compound.



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### INSTRUCTION FOR USE

- Dissolve 25.7 grams in 1000 ml purified/distilled water.
- Heat if necessary to dissolve the medium completely.
- Sterilize by autoclaving at 15 psi pressure (121°C) for 15 minutes.
- Cool to room temperature and aseptically add one vial of reconstituted Novobiocin Selective Supplement.
- Mix well before dispensing in sterile tubes or flasks as desired.

### QUALITY CONTROL SPECIFICATIONS

Appearance of Powder : Light yellow to pink homogeneous free flowing powder.

Appearance of prepared medium: Red coloured, clear solution which may have slight particles in tubes.

pH (at 25°C) : 6.2 ± 0.2

Microorganism	ATCC	Inoculum (CFU/ml)	Growth	Colour of medium	Colour of medium (After addition of Bromothymol blue)	H2S	Incubation Temperature	Incubation Period
Escherichia coli	25922	50-100	Good-luxuriant	Red	Red-blue	Negative reaction	35-37°C	24 Hours
Salmonella Typhi	19430	50-100	Good-luxuriant	Yellow	Dark green-blue	Positive (blackening of the medium)	35-37°C	24 Hours
Salmonella Enteritidis	13076	50-100	Good-luxuriant	Yellow	Dark green-blue	Positive (blackening of the medium)	35-37°C	24 Hours
Shigella flexneri	12022	50-100	Good-luxuriant	Red	Red-blue	Negative reaction	35-37°C	24 Hours



## **STORAGE**

Dehydrated powder, hygroscopic in nature, store in a dry place, in tightly-sealed containers between 25-30°C and protect from direct sunlight. Under optimal conditions, the medium has a shelf life of 4 years. When the container is opened for the first time, note the time and date on the label space provided on the container. After the desired amount of medium has been taken out replace the cap tightly to protect from hydration.

**Product Deterioration:** Do not use if they show evidence of microbial contamination, discoloration, drying or any other signs of deterioration.

## **DISPOSAL**

After use, prepared plates, specimen/sample containers and other contaminated materials must be sterilized before discarding.

**This product is for research use only.**