

Saline Lactose Broth with Phenol Red

Cat. 1379

Medium for detection of Staphylococcus aureus positive coagulase in dried skimmed milk.

Practical information

Applications	Categories
Detection	Staphylococcus aureus

Industry: Dairy products

Principles and uses

Saline Lactose Broth with Phenol Red is an enriched broth for coagulase positive Staphylococcus aureus in dried skimmed milk.

 After inoculation at 37 ± 1 °C for 24 hours, all the positive tubes will go into yellow colour. All these tubes must be inoculated in a solid agar to obtain isolated colonies to perform coagulase test. S. aureus is coagulase-positive, meaning that coagulase negativity excludes S. aureus.

The tube coagulase test is a valid means of identifying Staphylococcus aureus, provided that only a firm clot that does not move when the tube is tipped is considered a positive reaction.

Meat extract and proteose peptone provide nitrogen, vitamins, minerals and amino acids essential for growth. Sodium chloride supplies essential electrolytes for transport and osmotic balance. Lactose is the fermentable carbohydrate providing carbon and energy. Phenol red is the pH indicator.

Formula in g/L

Lactose	7,5	Beef extract	1,5
Phenol red	0,025	Sodium chloride	75
Proteose peptone	7,5		

Preparation

Suspend 91,5 grams of medium in 1 liter of distilled water. Mix well and dissolve by heating with frequent agitation. Boil for one minute until complete dissolution. Cool to 50 °C, mix well and dispense into tubes 9 ml per tube. Sterilize in autoclave at 121 °C for 20 minutes.

Instructions for use

The test is performed as follows:

- Inoculate a colony in a tube containing 0, 3 ml of Brain Heart Infusion Broth (Cat. 1331) or Trypticasein Soy Broth (Cat. 1224). Incubate for 20-24 h at 37 ± 1 °C.
- Add 0,1 ml of the previous broth to a small tube with 0,3 ml rabbit plasma with 0,1% EDTA.
- Incubate at 37 ± 1 °C and observe formation of a clot for a positive response clumping of bacterial cells after 4 hours. If no clot is observed by the end of 4 hours, then the test may be continued with an overnight incubation at room temperature and a final observation at 24 hours.

Quality control

Solubility	Appearance	Color of the dehydrated medium	Color of the prepared medium	Final pH (25°C)
w/o rests	Fine powder	Pinkish-beige	Pink-red	

Microbiological test

 Incubation conditions: (37 ± 2 °C / 24h).

Microrganisms	Specification	Characteristic reaction

Enterobacter aerogenes ATCC 13048
Escherichia coli ATCC 25922
Staphylococcus aureus ATCC 25923

Total inhibition
Total inhibition
Good growth

Yellow colonies

Storage

Temp. Min.:2 °C
Temp. Max.:25 °C

Bibliography

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