Milk Salt Agar Base

M661

Milk Salt Agar Base is used for selective isolation and cultivation of Staphylococci.

Composition**

Ingredients	Gms / Litre
Peptic digest of animal tissue	5.000
Beef extract	3.000
Sodium chloride	65.000
Agar	15.000
Final pH (at 25°C)	7.4±0.2

**Formula adjusted, standardized to suit performance parameters

Directions

Suspend 88 grams in 900 ml distilled water. Heat to boiling to dissolve the medium completely. Dispense and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 60°C. Aseptically add 10 ml of sterile skim milk (10% w/v skim milk powder solution) to every 90 ml of basal medium. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Milk Salt Agar is used for selective isolation and cultivation of Staphylococci. Koch reported that only Staphylococci could grow on agar media containing 7.5% sodium chloride (1). Chapman in his modification of the Kochs medium utilized this property for making the medium selective by the high salt content (2, 3).

This is a simple but nutritious medium. Beef extract, peptic digest of animal tissue and skim milk supply essential nutrients mainly nitrogenous and carbonaceous compounds including trace ingredients to Staphylococci. Sodium chloride at a concentration of 6.5% makes the medium highly selective as majority of the contaminating organisms are inhibited by the high salt concentration, but Staphylococci are able to tolerate the high sodium chloride concentration.

Quality Control

Appearance
Off-white to yellow homogeneous free flowing powder

Gelling
Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium
Yellow coloured opaque gel forms in Petri plates after addition of 10%v/v sterile milk

Reaction
Reaction of the basal medium (8.8gm in 90 ml distilled water) at 25°C. pH : 7.4±0.2

pH
7.20-7.60

Cultural Response
M661: Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours .

Organism	Inoculum (CFU)	Growth	Recovery
Escherichia coli ATCC 25922	>=10^3	inhibited	0%
Staphylococcus aureus ATCC 25923	50-100	good-luxuriant	>=50%

Storage and Shelf Life

Store below 30°C in tightly closed container and the prepared medium at 2 - 8°C. Use before expiry date on the label.

Reference

1. Koch, 1942, Zentralbl. Bakteriol. Parasitenkd. Abt. I. Orig., 149:122.
2. Chapman, 1946, J. Bacteriol., 51:409.
3. Rechcigl M., Jr. (Ed.), 1978, CRC Handbook Series in Nutrition and Food, Section G., Vol. III, CRC Press, Inc., Ohio, U.S.A.

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