



## 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
<i>Escherichia coli</i> ATCC 25922	>=10 <sup>3</sup>	inhibited	0%
<i>Staphylococcus aureus</i> 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.

Revision : 2 / 2015

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