



Nutrient Agar, pH 6.0 w/ 0.8% NaCl

M090

Intended Use

Recommended for cultivation of bacteria requiring slightly acidic pH.

Composition**

Ingredients	Gms / Litre
Peptone	5.000
HM peptone B #	3.000
Sodium chloride	8.000
Agar	15.000
Final pH (at 25°C)	6.0±0.2

**Formula adjusted, standardized to suit performance parameters

Equivalent to Beef extract

Directions

Suspend 31 grams in 1000 ml purified / distilled water. Heat to boiling to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool to 45-50°C. Mix well and pour into sterile Petri plates.

Principle And Interpretation

Nutrient Media are general purpose media used for the examination of water and dairy products according to Standard Methods for the Examination of Water and Waste water (1) and Dairy Products (2). Nutrient Agar, pH 6.0 with 0.8% NaCl is a modification of Nutrient Agar w/ 0.8 % NaCl and recommended by APHA (3). In the former, the pH of the medium is adjusted to 6.0 to allow the growth of organisms requiring slightly acidic pH. Since the medium contains 0.8 % sodium chloride, it can be used as a base for enrichment with blood or ascetic fluid or other supplements for cultivation of fastidious microorganisms. Sodium chloride maintains the osmotic balance so that red blood cells do not rupture when blood is added as supplement (1). HM peptone B and Peptone provide the necessary nitrogen compounds, carbon, vitamins and also some trace ingredients to the nonfastidious organisms like *Bacillus subtilis* and *Staphylococcus aureus*. Sodium chloride maintains osmotic equilibrium of the medium.

Type of specimen

Dairy samples; Water samples

Specimen Collection and Handling

For dairy samples, follow appropriate techniques for sample collection and processing as per guidelines (1,8).

For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards.(3)

After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions:

Read the label before opening the container. Wear protective gloves/protective clothing/eye protection/ face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations :

1.This medium is general purpose medium and may not support the growth of fastidious organisms.

Quality Control

Appearance

Cream to yellow homogeneous free flowing powder

Gelling

Firm, comparable with 1.5% Agar gel

Colour and Clarity of prepared medium

Light yellow to amber coloured clear to slightly opalescent gel forms in Petri plates

Reaction

Reaction of 3.1% w/v aqueous solution at 25°C. pH : 6.0±0.2

pH

5.80-6.20

Cultural Response

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

Organism	Inoculum (CFU)	Growth	Recovery
<i>Bacillus subtilis</i> ATCC 6633	50-100	good	50-70%
<i>Candida albicans</i> ATCC 10231	50-100	luxuriant	≥70%
<i>Staphylococcus aureus</i> ATCC 25923	50-100	good	50-70%

Reference

1. Clesceri L. S, Greenberg A. E. and Eaton A. D., (Eds.), 1998, Standard Methods for the Examination of Water and Wastewater, 20th Ed., APHA, Washington, D.C.
2. American Public Health Association, 1978, Standard Methods for the Examination of Dairy Products, 14th Ed., APHA, Inc., Washington, D.C.
3. Downes F. P. and Ito K., (Eds.), 2001, Compendium of Methods for the Microbiological Examination of Foods, 4th Ed., American Public Health Association, Washington, D.C.

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