



## Nutrient Broth No.3

M1902

It is a non-selective medium serves as base for the culture and growth of microorganisms.

### Composition\*\*

Ingredients	Gms / Litre
Meat extract	1.000
Peptone	5.000
Sodium chloride	5.000
Yeast extract	2.000
Final pH ( at 25°C)	7.4±0.2

\*\*Formula adjusted, standardized to suit performance parameters

### Directions

Suspend 13 grams in 1000 ml distilled water. Heat if necessary to dissolve the medium completely. Dispense as desired and sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes.

### Principle And Interpretation

Nutrient Broth is a general purpose medium used for the cultivation of microorganisms that are not exacting in their nutritive requirements. An infusion of meat and peptone constitute the nutrient composition of many media.

Nutrient Broth No. 3 is a basic culture medium used for maintaining microorganisms (1) and for purity checking prior to biochemical or serological testing. It is used for the cultivation and enumeration of bacteria, which are not particularly fastidious. In semisolid form it is used for maintenance or control of standard organisms. Addition of different biological fluids such as horse or sheep blood, serum, egg yolk, etc. makes it suitable for the cultivation of fastidious organisms (2).

Peptone, meat extract and yeast extract provide the necessary nutrients for the growth of non-fastidious organisms. Sodium chloride maintains the osmotic equilibrium of the medium.

### Quality Control

#### Appearance

Cream to yellow homogeneous free flowing powder

#### Colour and Clarity of prepared medium

Light amber coloured clear solution in tubes

#### Reaction

Reaction of 1.3% w/v aqueous solution at 25°C. pH : 7.4±0.2

#### pH

7.20-7.60

#### Cultural Response

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

#### Cultural Response

Organism	Inoculum (CFU)	Growth
<b>Cultural Response</b>		
<i>Escherichia coli</i> ATCC 25922	50-100	good-luxuriant
<i>Pseudomonas aeruginosa</i> ATCC 27853	50-100	good-luxuriant
<i>Staphylococcus aureus</i> ATCC 25923	50-100	good-luxuriant
<i>Streptococcus pyogenes</i> ATCC 19615	50-100	good-luxuriant

## 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. Lapage S., Shelton J. and Mitchell T., 1970, Methods in Microbiology, Norris J. and Ribbons D., (Ed.), Vol. 3A, Academic Press, London.
2. MacFaddin J. F., 1985, Media for Isolation-Cultivation-Identification-Maintenance of Medical Bacteria, Vol. I, Williams and Wilkins, Baltimore.

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